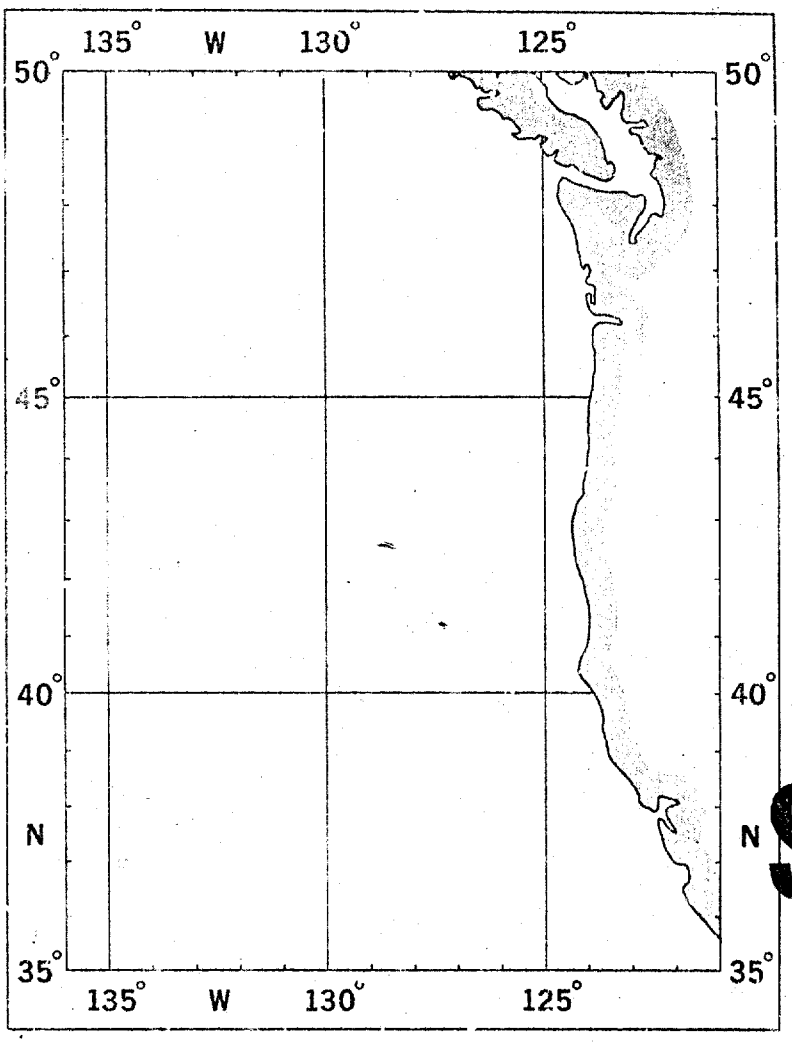
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U.S. NAVY REGIONAL CLIMATIC STUDY OF THE NORTHERN CALIFORNIA OPERATING AREA

SEP, 1988



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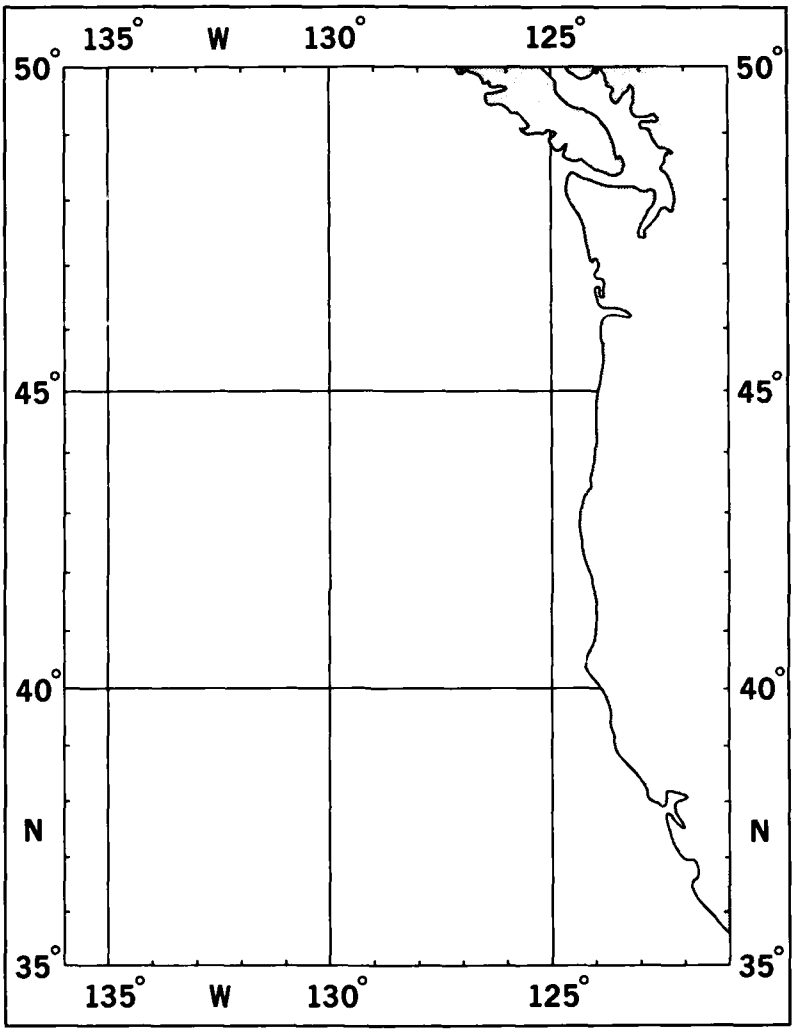
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U. S. NAVY REGIONAL CLIMATIC STUDY OF THE NORTHERN CALIFORNIA OPERATING AREA

The U.S. Navy Regional Climatic Study of the Northern California Operating Area was prepared by the Officer in Charge, Naval Oceanography Command Detachment, Asheville, North Carolina under authority of Commander, Naval Oceanography Command. The work was performed at the National Climatic Data Center (NCDC). Specific acknowledgement of the NCDC staff is made to Messrs. J. D. Elms and W. A. Brower, co-project leaders; Messers. C. N. Williams, Jr., R. G. Baldwin and Ms. P. L. Franks for data processing and digital graphics; Mr. M. J. Changery and Dr. W. J. Koss for technical review; and Messrs. M. G. Burgin and S. J. Miller for their drafting skills.

Geographical and Data Coverage

This study, entitled the U.S. Navy Regional Climatic Study of the Northern California Operating Area, is for the region which encompasses most of the contiguous U.S. Pacific Coast and waters some 500 to 700 miles offshore (35°N to 50°N; 121°W to 136°W). The selected limits allowed for a small overlap with the Southern California Operating Area study (Naval Oceanography Command, 1983) and enough northern extent to cover the coasts of Oregon, Washington, and the southern tip of Vancouver Island. The longitudinal limits allowed the inclusion of the Puget Sound area and, in conjunction with the northern limit, the Strait of Juan De Fuca. From the western limit it is obvious that the greatest interest, and therefore emphasis, was placed on the marine areas. Figure 1 outlines the study area and shows the location of the land station summaries, location of moored buoys and bathymetry information.

Surface marine observation statistics are presented on monthly charts in the forms of graphs, tables and isopleth maps. Land station data appear graphically and in Station Climatic Summary tables. The marine data (mostly from ships of opportunity) were summarized and machine plotted by one-degree quadrangle. Data for the moored buoys were summarized independently and plotted at their locations so comparisons between the data sources could be made as the charts were being subjectively analyzed. The graphs and tables for the marine areas are also presented by one-degree quadrangles (for visibility, wave heights, and wind roses). The geographical area for the tables and wind roses had to be divided and presented on two pages for clarity. These graphs and tables represent the objective compilation of available ship data; the data were not adjusted for suspected bias (low observation count, heavy weighting of observations during a short time interval, biases in coding, etc.), and differences may be found when comparing the graphical data with isopleth analyses. The total number of observations for a given one-degree square should always be considered when interpreting the data, as there may be an insufficient number to permit representative statistics.

Just over two million surface marine observations were used in computing the statistics. These data were collected by ships of various registry traveling in the area. Many of the ships observations are presently transmitted over the Global Telecommunications System, captured and archived. However, many are digitized from ship log forms by various participating members of the World Meteorological Organization, and exchanged under international agreement among the various maritime nations of the world. Data for this study date back to 1854 and run through 1985. The bulk of the observations are from the last 30 years, which is significant because more recent observations contain more elements than pre-1948 reports. The density of observations is greatest along the major shipping routes; in this area major ship traffic moves north-south just off the coast, and along the major Asian routes to and from San Francisco, Portland, Tacoma and Vancouver. With the amount of traffic in the study area, the data are fairly evenly distributed among the one-degree squares. Higher observation counts are found just off the coast of the major ports.

The mean sea current charts were obtained from available ship's "set and drift" measurements that had been forwarded to the Naval Oceanographic Office from ships of various registry. The data were summarized to give the primary and secondary current directions and mean speeds.

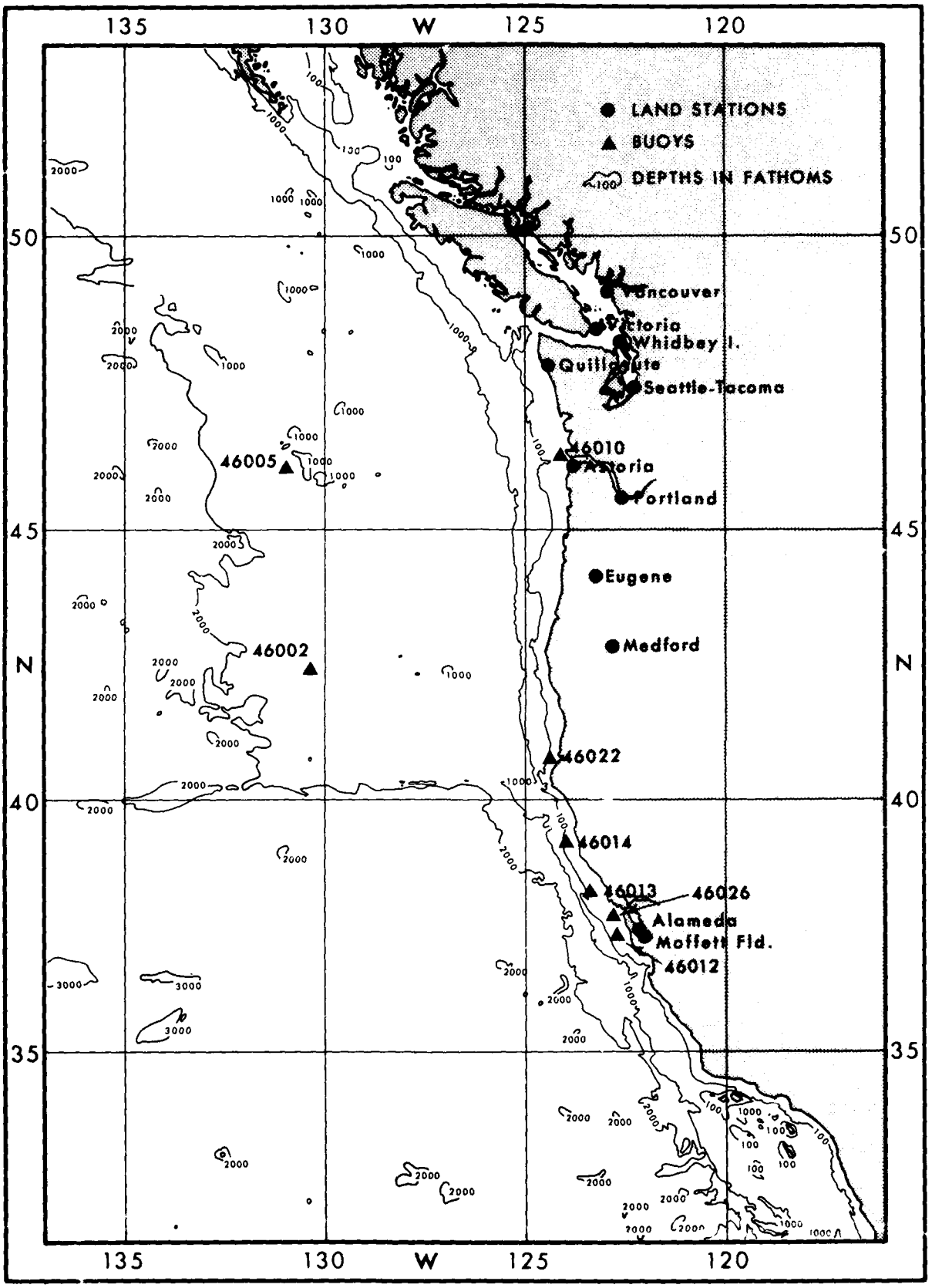


FIGURE 1. STUDY AREA LOCATOR MAP AND BATHYMETRY CHART

Physical Features

The northern California operating area borders along most of the contiguous U.S. Pacific Coast as it extends from south-central California near Pismo Beach to near Cape Cook on Vancouver Island, Canada. The western U.S. Coast does not have an extensive coastal plain as does the Atlantic Coast, but is characterized by steep sea cliffs, rock terraces, and notched fjords. Mountains nearest the Pacific Coast are simply referred to as the Coast Range, and within the study area they run the full length of the Pacific Coast except for the break at San Francisco Bay. From Vancouver Island, which is mostly mountainous, the Coast Range extends southward into southern California where it joins up with the Sierra Nevada Mountains at the southern end of the San Joaquin Valley.

Although it is part of the Coast Range, Mt. Olympus in northwestern Washington state appears to stand alone as it towers over the Strait of Juan de Fuca to the north and the Willapa Hills (elevation 1000 to 3000 feet), which lie to the south between the Chehalis River valley and the Columbia River valley. While a few peaks in the Coast Range reach over 8000 feet, most have elevations between 4000 and 7000 feet.

Farther inland, paralleling the Coast Range, is a significantly higher range made up of the Cascade Mountains in the north and the Sierra Nevada Mountains in the south. The increased height of these mountains make them a much more influential climate barrier because they separate the wetter western section from the drier, almost desert, region to the east. In fact, probably only in the Himalayas would a greater rainfall and temperature contrast be found between the windward and leeward side of the mountains (Miller, et al., 1954). The Cascade Mountains extend out of Canada into northern California to include Mt. Lassen on the northeastern edge of the Sacramento Valley. Although there is a break in the Cascade range in the vicinity of the Pitt River between Mt. Shasta and Mt. Lassen, the Cascade range includes Mt. Lassen because it is of volcanic origin as is most of the Cascade range, whereas the Sierra Nevada range is of monadnock formation. Basically, the eastern rim of the Central Valley, which is a combination of the Sacramento Valley and San Joaquin Valley, is formed by the Sierra Nevada range.

The higher volcanic peaks of the Cascades are: Mt. Baker (10,730 ft.) near the Canadian border; Mt. Rainer (14,408 ft.) the highest peak of the Cascades in central Washington; Mt. Adams (12,307 ft.) just north of the Columbia River basin; Mt. Hood (11,235 ft.) just south of the Columbia River basin; the Three Sisters (10,354 ft.) in central Oregon; Mt. Shasta (14,162 ft.) in northern California; and Mt. Lassen (10,457 ft.) just south of the Pitt River, which is the most southern peak in the range. Few passes are found in the Sierra Nevada range and those are generally 7000 to 9000 feet above sea level. This gives the range a rather continuous ridge appearance with fewer prominent peaks than the Cascades. Mt. Whitney (14,494 ft.) at the southern end of the Sierras, however, is the highest peak in the contiguous United States. Of geological note, Mt. Whitney is also less than 85 miles from the lowest point in the country, located in Death Valley at 276 feet below sea level. For a visual perspective of the elevations within the study area see Figure 2 (Topographic Chart).

The North American Pacific Continental Shelf is relatively narrow, especially when compared to those on the Atlantic and Gulf coasts. Because of the narrow shelf and the steep terrain along the Pacific Coast, storm surges are of little consequence to the general population. As the narrow continental shelf helps restrict the size of the storm surges, the sharp rise in elevation near the coast limits possible damage because the terrain height is generally greater than the potential height of the storm surge (U.S. Department of Commerce, 1980).

Tsunamis are seismic sea waves generally produced by submarine earthquakes or volcanic eruptions, and can be of enormous size. Structurally they are long gravity waves capable of traversing an entire ocean, which upon reaching shallow water greatly increase in height. Near shore they often become breaking waves of great force causing significant damage, or cause rapidly rising water levels which flood low lying areas. Fortunately, for the study area, tsunamis are relatively rare. However, the Alaskan earthquake of March 1964 did affect the Pacific Northwest Coast where, in the vicinity of Crescent City, California, the water elevation rose approximately 6.3 meters above the mean lower low-water level (U.S. Department of Commerce, 1980) thereby causing extensive damage. Only two other tsunamis have caused major destruction in recent times; the Great Aleutian Tsunami of 1946, which killed 173 people in Hawaii when heights of 55 feet were reported, and the 1960 Chilean Tsunami which killed 61 people in Hawaii along with 330 in Chile and 199 in Japan (Houston and Garcia, 1978).

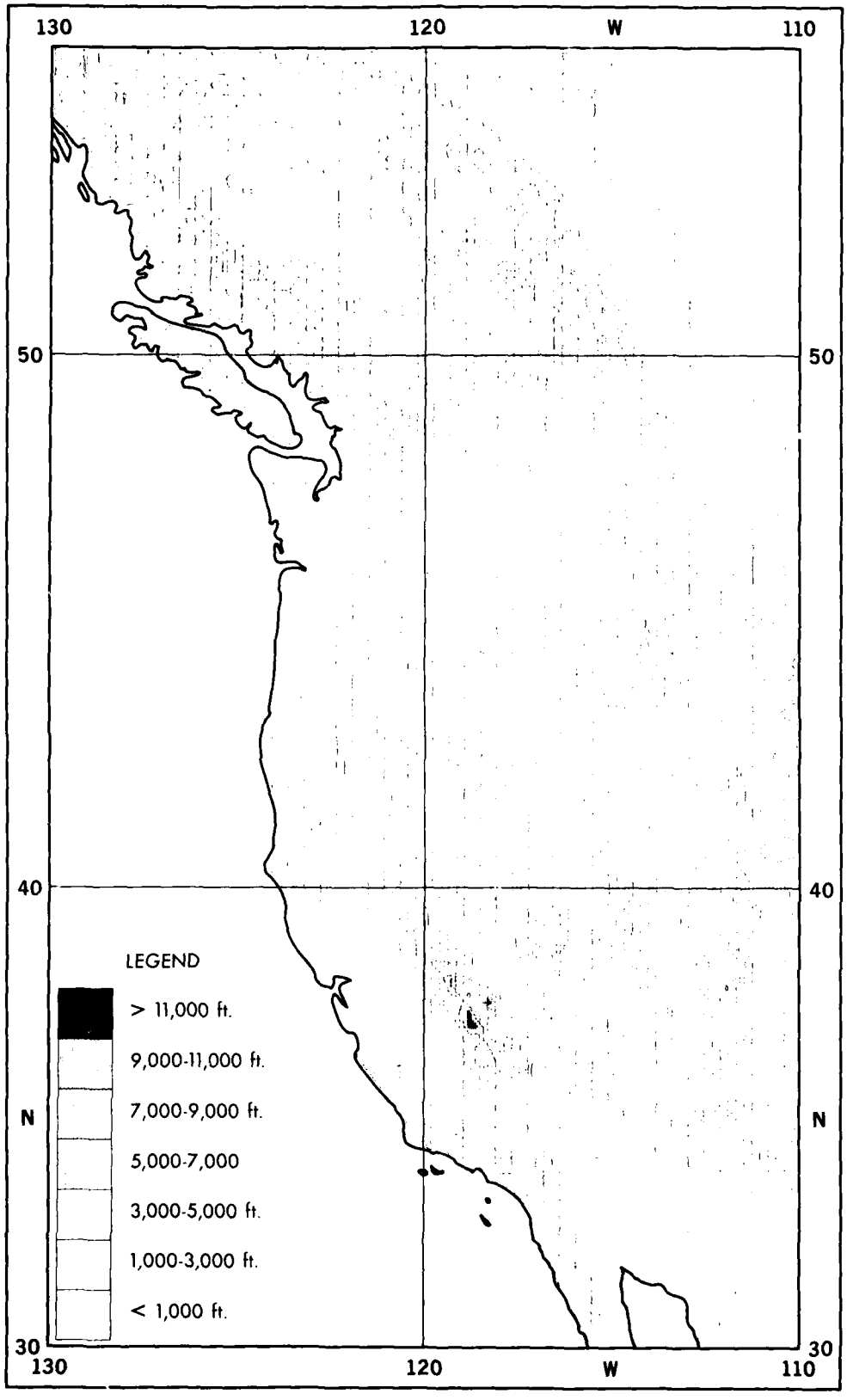


FIGURE 2. TOPOGRAPHIC CHART

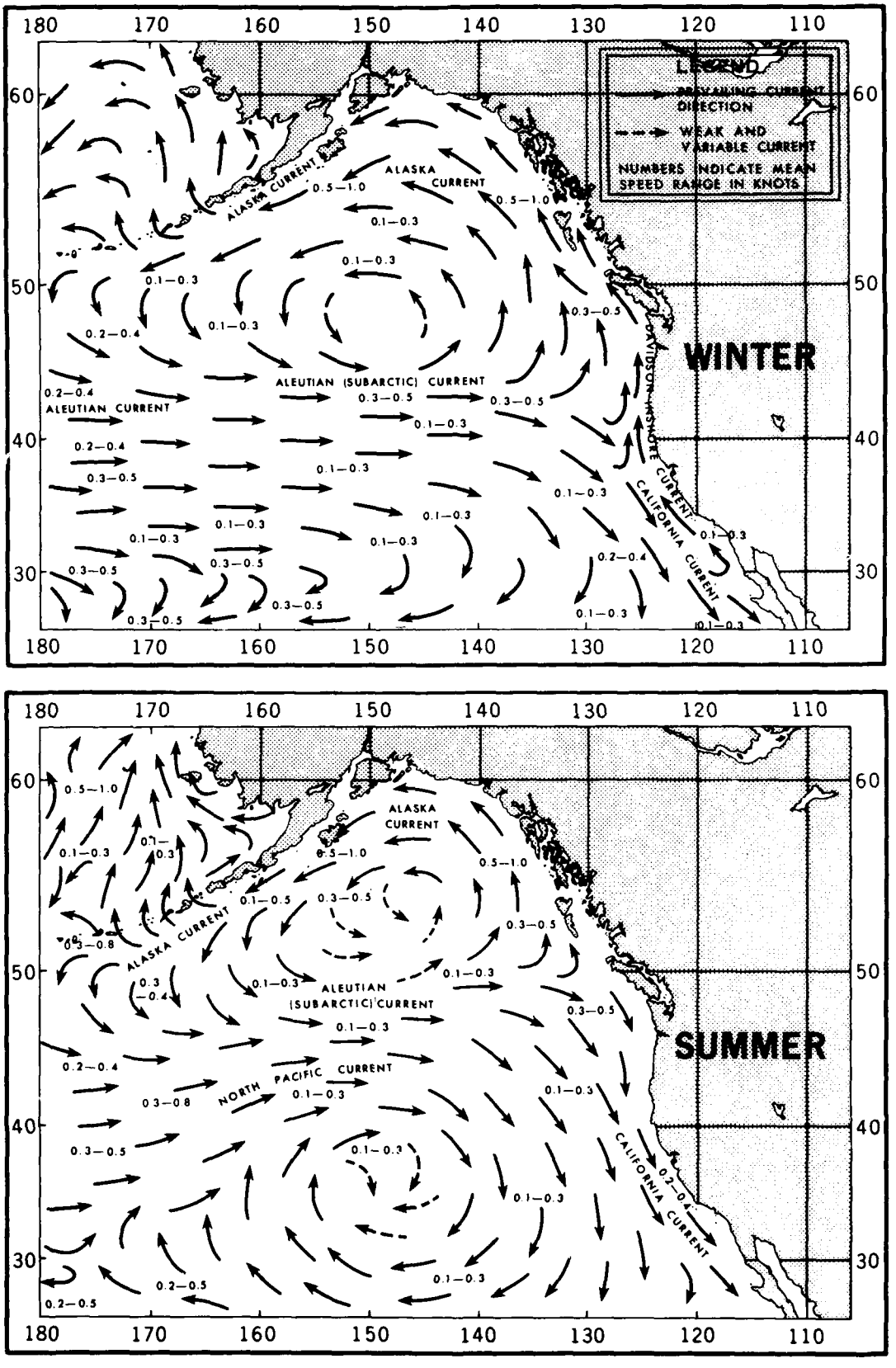


FIGURE 3. SURFACE CURRENTS (SUMMER AND WINTER)

The California Current, which is an extension of the Subarctic Current, is a cold current that runs froms north to south along the west coast of the United States. Being driven by wind stress, this current is mainly controlled by the interaction between the north Pacific subtropical high and the thermal low located over the southwestern United States. The circulation away from the coast in the near-surface layer causes upwelling of colder water from depths of 50 to 200 meters (U.S. Department of Commerce, 1980). The upwelling is strongest during the spring and summer, somewhat reduced in strength during the late summer and early fall, and weakest in the winter when a mean poleward flow known as the Davidson Inshore Current is established near-shore. Reference Figure 3 for a schematic of the summer and winter surface currents.

This upwelling is important to commercial fishing because it produces organic nutrients which support large stocks of commercially important fish. Changes in the large-scale atmospheric circulation offshore, in response to both thermal and wind forcing processes, may cause the near-shore current to alter its normal pattern and thereby affect commercial fishing, as well as the Pacific Coast climate (Nelson and Husby, 1983).

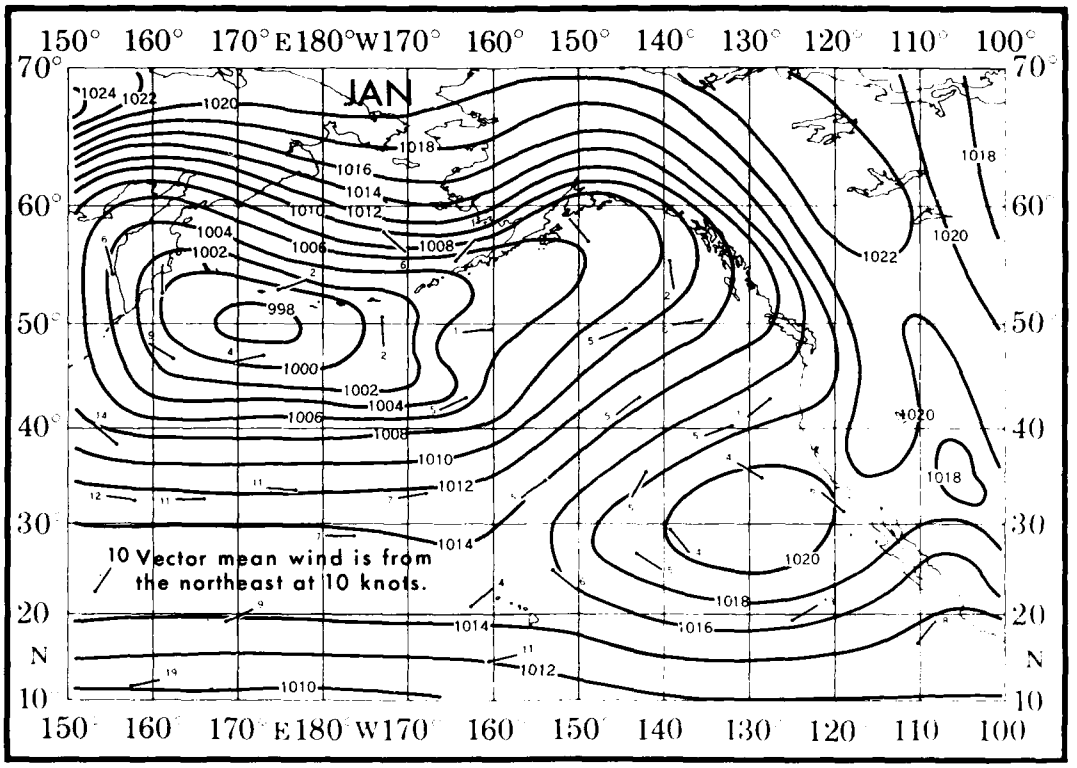
Climate

Climate variability is naturally much greater for the Continental region than for the marine area because of the diverse regional topography.

A dominate controlling feature of the regional climate is the semi-permanent North Pacific Subtropical High. During summer, the high becomes more intense and moves farther north thereby restricting storm system movement into the region. With winter, the subtropical high is less intense and retreats somewhat southward, thereby allowing more extratropical storm systems to penetrate farther south into the study area. Figure 4 shows the January and July mean pressure patterns which illustrate this change in the large-scale synoptic features. Another important feature of the subtropical high, which is most prevalent during its summer peak, is the steady wind flow from the northwest. This not only helps drive the cold California Current, but is primarily responsible for the high frequency of coastal summer fog and for the sharp temperature gradient inland near the coast. Fog is formed as relatively warm Pacific air moves over the cold current and pushes inland. As this air moves farther inland, the fog begins to lift because of heating, thereby forming a deck of low clouds, which then dissipates rather quickly through evaporation as it continues to move farther inland. At night these low clouds characteristically move farther inland but then recede back to the coast during the day as the air warms up. In examining the historical station data (U.S. Department of Commerce, 1985) for the number of days with fog and visibilities of 1/4 mile or less, the higher frequencies for southern California, the Central Valley and inland stations occur during the winter and are mostly associated with radiation inversions; for the coastal stations of northern California the highest frequencies occur during the late summer and fall and are related to the advection fog associated with the steady northwest flow crossing the cold California Current. Because of the effect of this maritime air, the climate in such areas as the San Francisco Bay varies significantly in very short distances. For example, the July maximum temperature averages 64^{o}F on the coast at Half Moon Bay, 87^{o}F at Walnut Creek some 25 miles inland, and 95^{o}F at Tracy some 50 miles inland (U.S. Department of Commerce, 1970).

Along the Pacific Coast, precipitation patterns within short distances are affected more by topography than by distances from the sea. Precipitation in the Bay area falls mostly during the winter, averaging between 15 to 25 inches per year. Annual precipitation values (see Figure 5) for the Pacific Coast range from 16 to 32 inches in southern California, over 80 inches in northern California and southern Oregon, to over 100 inches in northern Oregon and Washington, where the greatest amount of nearly 200 inches is estimated to fall on the windward slopes of Mt. Olympus. On the lee side of the Cascade and the Sierra Nevada ranges, annual precipitation amounts generally average less than 16 inches with portions of south-central Washington, western Nevada, and southeastern California receiving less than 8 inches.

Although thunderstorms occur throughout the study area, they are rather infrequent and usually not severe. From Figure 6 the annual mean number of thunderstorms (Changery, 1981) is less than 5 thunderstorms per year along the western and central portions of California, and less than 10 per year for western Oregon, northwestern California and western Washington (except for the Mt. Olympus area where frequencies exceed just over 10 per year). The highest frequencies of thunderstorms occur over the Sierra Nevadas and the northern Cascade range where occurrences average over 20 per year. For the lower elevation regions and the coastal areas, the occurrences of thunderstorms are equally



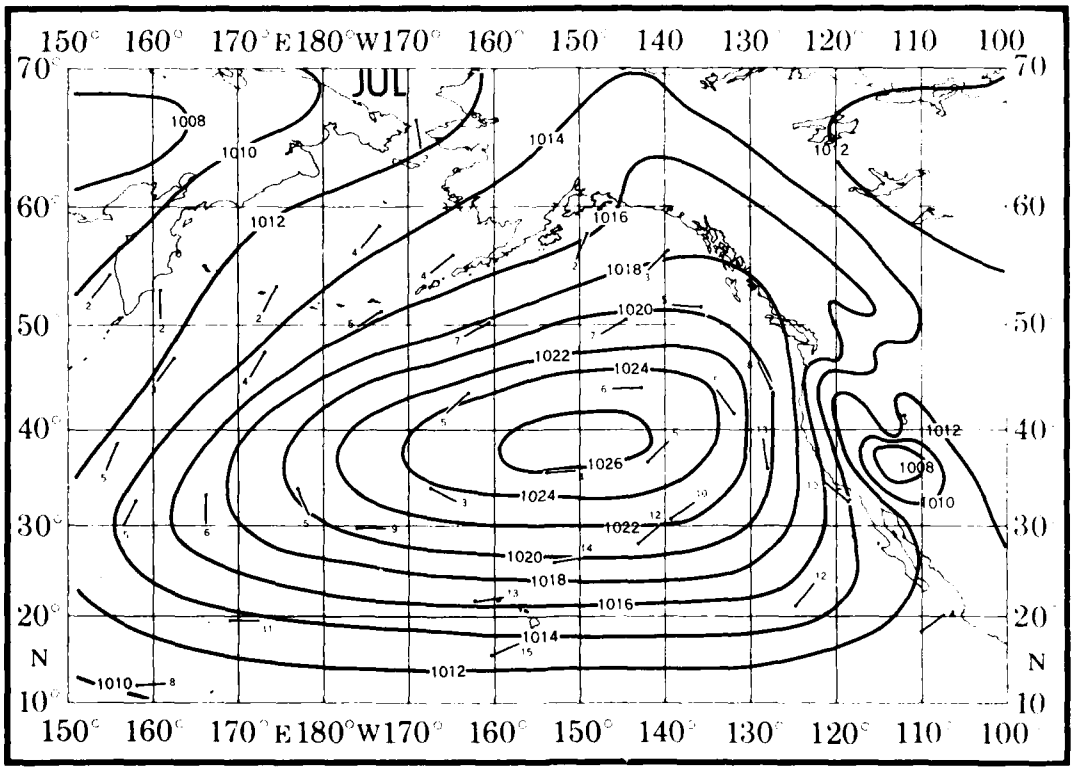


FIGURE 4. JANUARY AND JULY MEAN SEA-LEVEL PRESSURE AND VECTOR MEAN WINDS

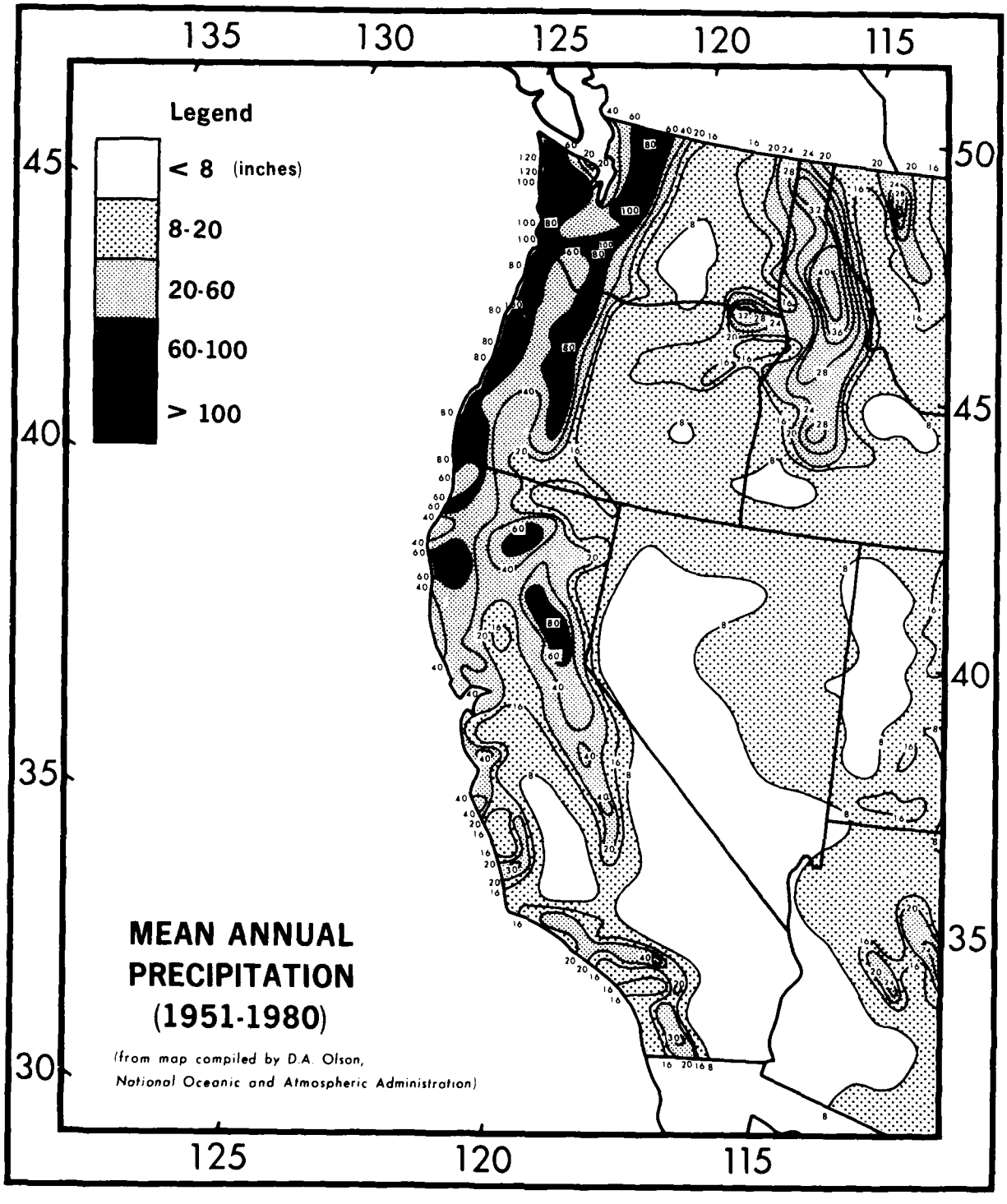


FIGURE 5. MEAN ANNUAL PRECIPITATION

likely in any month, whereas for the higher mountainous regions occurrences are more frequent in the summer (May through September). At higher elevations, thunderstorms are generally not severe and produce little rainfall; however, each year a considerable number of forest fires are started by accompanying lightning. Although rare, thunderstorms can produce flash flooding, and hail 1/4 to 1/2 inch in size. Flash flooding throughout the western United States generally results from one to three days of heavy precipitation, or a rapid snow melt, or a combination of the two. Often the problem is worsened by previous season forest fires which destroyed the vegetative land cover on the watersheds and thereby enhanced precipitation run-off. Damage from these floods can be severe, however, as larger dams and reservoirs are constructed on the larger streams and rivers, flooding is more controlled and less likely to occur.

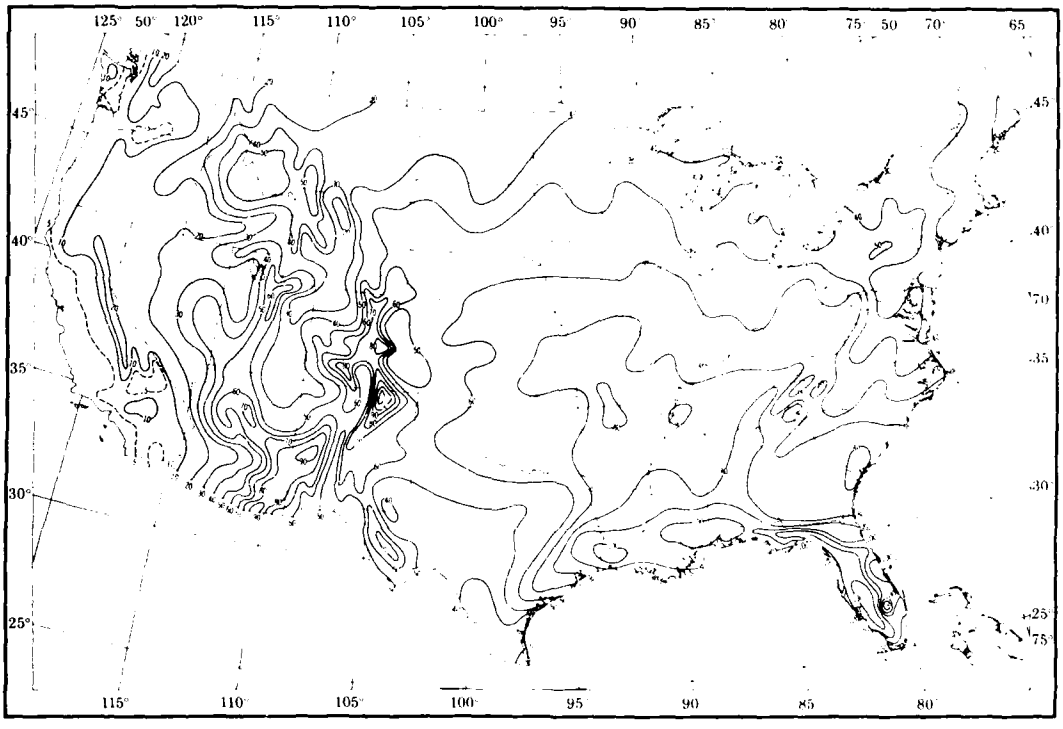


FIGURE 6. MEAN NUMBER OF ANNUAL THUNDERSTORMS

Tornadoes have been infrequently sighted within the study area. Generally they are not severe, and cause only minor damage to trees and light buildings. Most frequent sightings are waterspouts off the southern California coast.

The 1982-83 winter season was one of the worst on record for severe weather along the Pacific Coast. It was most likely related to the 1982-83 El Nino/Southern Oscillation (ENSO). Ropelewski and Halpert (1986), using climate division precipitation data from the 1875-1980 period, showed that the Pacific Northwest weather appears to have a coherent ENSO response. The 1982-83 event also adversely affected southern California, and this is most likely related to the ENSO event being one of the strongest on record. From January 22nd through the 29th a series of storms pounded the U.S. Pacific coast, producing heavy rains, strong winds, heavy surf, and high tides which destroyed millions of dollars of property and caused widespread shoreline damage (U.S. Department of Commerce, 1983). During this eight day period, the Storm Data (January, 1983) publication listed some of the unusual weather phenomena as follows: Del Norte County suffered its worst coastal flooding since a Tsunami struck Crescent City in 1964; Point Arena reported wind gusts to 69 mph; in Humbolt County rainfall amounts were from 2 to 10 inches; northern California experienced high tides with waves 32 feet high, destroying 30 homes and 4 businesses, and damaging an additional 1400 homes and 650 businesses. In Oregon a combination of high winds and waves pushed high tides up to 2.5 feet above

predicted values which caused widespread flooding and beach erosion. During this period, high tides combined with brisk winds produced considerable flooding along the Washington coast and in Puget Sound. The following month (February, 1983) did not bring much relief to the region from the weather because an unusually large number of Pacific cyclones continued to lash the northern California coast with frequent high winds, heavy rains and high tides.

Throughout much of the study area, summer consistently brings extended periods with no precipitation. These drought conditions are expected, and are dealt with rather effectively through the use of good irrigation systems, especially in southern California and the Central Valley. It is when an exceptionally dry winter occurs that the agricultural sector is hurt most. When several back-to-back dry winters occur, the reservoirs and water supplies are affected and the impact is felt in the heavily populated areas. This also has an adverse effect on energy production (hydroelectric power) in the Pacific Northwest, especially when the winter snowpack is rather light.

At one time or another, nearly every section of the study area has observed snowfall, however, it is very infrequent in the lower elevations especially west of the Cascade and Sierra Nevada Mountains. In the higher elevations of the mountain ranges, snowfalls average between 250 and 500 inches. The greatest annual snowfall recorded in California was 884 inches at 8000 feet at Tamarack; in Oregon, 879 inches at Crater Lake National Park; and in Washington, 1122 inches at Rainier Paradise Ranger station (which is also the record seasonal snowfall for North America).

Marine Climatological Elements

Precipitation

Of the elements recorded in the marine data base, precipitation is the one most subject to error in both the way it is observed and the way it is interpreted. For example, it is often inferred in the literature that ships often try to avoid foul weather and thereby bias the data towards fair weather with fewer precipitation observations. Elms (1986) compared the Volunteer Observing Ship (VOS) observations to other sources of data such as Ocean Station Vessel (OSV) and buoys finding little evidence that "fair weather bias" is a serious problem for most applications of marine climatic data. With the introduction in 1982 of a present weather indicator (i_x) to the international Ship Synoptic Code FM13-VII, users have to be careful not to bias the data, especially that from between January 1982 and March 1985 when the (i_x) indicator was inadvertently left out of the international data exchange format.

In comparing the frequencies of the precipitation charts in this volume to those in the U.S. Navy Marine Climatic Atlas of the World, Volume II, North Pacific Ocean (Revised 1977), one will generally see a smaller number of present weather observations reporting precipitation. The major reason for this is that in the earlier publication the weather codes 20-27 (precipitation in the past hour) were counted in the precipitation frequencies to help correct an apparent observation bias. For this regional climatic study it was decided to present the data as reported. The higher frequencies (20-27 code included) certainly seem to agree better with land stations and OSV data for most regions of the globe. The 1982 code change may also affect the frequencies. A more in-depth study is certainly needed to help decide which method best represents the climate. At this point however, it is possible only to bring the issue to the attention of the data users. Even without the coding problems, assessing oceanic rainfall data is a major problem because transit ships are unable to take quantitative precipitation measurements. A number of studies have been conducted in efforts to predict precipitation amounts, or rates of fall, based on estimates derived from the use of present weather observations from ships of opportunity (Goroch, et al., 1984) and readings from satellites (Rao, et al., 1976).

Although a simple objective interpretation of the percent-of-time a present weather observation reports precipitation at the time of the observation is probably low, the results are estimated generally to be off by only one to two percent in the southern portion of the study area and by five percent at most in the northern sections. The precipitation pattern is greatly influenced by the strength and location of the permanent Pacific subtropical high. During the winter it is at its weakest and therefore precipitation frequencies increase. The precipitation pattern remains consistent through the annual cycle as higher frequencies generally increase with latitude. During the winter the pattern is relatively zonal, while during the summer the pattern changes from lower to higher frequencies from southeast to northwest within the study area. Summertime frequencies generally are less than 10 percent, ranging from two to three

percent off California to near 10 percent off northern Vancouver Island. Winter brings more occurrences with frequencies ranging from 5 to 7 percent off southern California to 20 to 25 percent off Vancouver Island. Marine observations even reflect the influence of the Olympic Mountains as is shown by the frequencies in mid-winter which are 20 percent or better off the Pacific Coast of Washington, the windward side, and less than 10 percent in Puget Sound, the lee side.

Air Temperature

Air temperature is one of the elements most frequently observed by mariners. It should be noted that on many ships, the heating effect of the ship's structure has a tendency to produce higher than actual ambient air temperature readings because of instrument exposure (Folland et. al., 1984; Wright, 1986). This is especially true under calm, sunny conditions. Therefore some ship temperature observations have a warm bias, however, the aggregate is relatively representative after the erroneous outliers have been eliminated and the numerous nightime observations and unbiased daytime observations included.

From November through March, the mean air temperature pattern is relatively zonal with the monthly mean temperatures ranging from the mid-40's(^{o}F) in the north to the upper 50's(^{o}F) and low 60's(^{o}F) in the south. In April temperatures begin to cool off along the coast, and by July mean air temperatures along a large portion of the coast are below 57^{o}F and about the same as those found in the extreme northwest corner of the study area, and over the Strait of Georgia. By August, coastal mean temperatures have risen a degree from those of July to just below 58^{o}F, however, even with greater warming in other regions, the coastal section reports the lowest mean air temperatures. This general pattern of cool coastal temperatures remains through October, and the zonal temperature pattern re-establishes itself in November.

Sea-Surface Temperature

Sea-surface temperatures are recorded with a fairly high frequency in marine observations. The principle methods for sampling are water intake thermometers and buckets. Even though the two methods can produce slightly different results, (Barnett, 1984) the data can be used with considerable confidence when looking at the long-term means.

Little sign of cold-water upwelling off the coast of California appear on the mean sea-surface temperature charts for February and March. However by April as the subtropical high begins to re-establish its dominance, signs of upwelling begin to appear on the temperature charts. Indications of upwelling then remain into January although by that time the subtropical high has long ceased its dominance over the Aleutian Low. It is the influence of the sea-surface temperature that produces a similar pattern to the mean air temperature. Although upwelling is evidenced on some of the monthly charts between November and April, the mean sea-surface temperatures generally increase from north to south with mean values ranging from the mid to low 40's(^{o}F) to near 65^{o}F. The upwelling is well established from June through October with sea-surface temperatures holding in the 50's(^{o}F) off the coast and in the northeast quadrant, while temperatures in the 60's(^{o}F) are re-established in the southwest quadrant.

Surface Winds

Surface wind is one of the most commonly observed elements. Many of the observations from the NCDC data base are visual observations based on the roughness of the sea. In recent years more ships acquired anemometers and reported measured winds. Prior to 1963, many observed wind speeds were recorded in the Beaufort scale; such estimates have proven to be quite reliable and can be used with a high degree of confidence. Five sets of wind speed isopleths are presented: the scalar mean speed and the percent of frequency of winds less than 11 knots, from 11 to 21 knots, from 22 to 33 knots, and greater than or equal to 34 knots. Also presented are wind roses, for one-degree squares.

Seasonal variations in the Pacific subtropical high have the greatest influence on the northern California operating area wind regime. With the subtropical high weak and less influential during the winter, more low pressure systems are able to move out of the Gulf of Alaska and subsequently influence the west coast region from central California to Alaska. In the winter season wind direction varibility is greatest in the northern portion of the study area with resultant winds being generally southwesterly. In the southern regions the subtropical high still predominates although it is reduced in size

in comparison to that at its summer peak; here the prevailing winter winds remain out of the northwest near-shore and are more southerly in the open waters west of 130°W. Summer dominance by the subtropical high gives prevailing winds out of the north across most of the study area, except for the northernmost quarter where they are more west to northwesterly.

Mean wind speeds during the winter range from near 10 to 15 knots along the coast to just over 20 knots in the northwest corner of the study area. Summer brings lighter winds to most regions with mean speeds generally 9 to 12 knots, except in an area off the California coast, to the west of Cape Mendocino and Point Arena, where mean speeds generally are over 15 knots and reach a maximum in July of over 19 knots.

Gale force winds ($\geq$34 knots) are encountered rather infrequently even during the winter when frequencies range from 1 to 3 percent off southern California, and to near 10 percent in the northwest corner of the study area. Summer occurrences are even less frequent due to the dominance of the subtropical high. Most areas during the summer experience gale force winds one percent of the time or less. However, west of Cape Mendocino, in the region of highest mean winds, gale force winds are observed 6 to 7 percent of the time, the highest for any region during the summer. Wind speeds of 10 knots or less are observed much more frequently near shore than over the open water. Frequencies range from less than 20 percent of the observations during winter in the northwest corner of the charts to 40 percent or more near the coast. In the Strait of Georgia, and from San Francisco south, wind speeds of 10 knots or less are observed as much as 60 to 80 percent of the time. Summer brings little change to the frequency values near shore, but brings generally slightly higher frequencies over the open water where frequencies of 30 to 40 percent are observed.

Wind speeds from 11 to 21 knots are observed during the winter from 20 to 40 percent of the time near the coast and generally between 40 and 50 percent across open water. Summertime patterns are similar to those of winter for this wind speed interval with frequencies generally increasing by 5 to 10 percent for most regions.

For wind speeds from 22 to 33 knots, the seasonal frequency pattern between winter and summer changes significantly. During the winter, frequencies range from 5 to 10 percent along the coast to from 25 to 30 percent in the northwest quadrant of the study area. Summer brings a pattern similar to the mean speed pattern where frequencies are greatest some 100 to 300 miles off the coast of California, with frequencies reaching 25 to 30 percent. For most other regions frequencies generally average from 5 to 10 percent.

Visibility

Visibilities are difficult to measure at sea because of the lack of distance reference points. Climatically, many low visibility observations are probably missed because the observer is too busy with other duties (a form of fair weather bias). However, the coarseness of the visibility (code) intervals helps to minimize the problem, thereby permitting the summarized data to be relatively consistent.

From the visibility tables presented by one-degree square, it is clear that visibilities are generally good throughout the Northern California Operating Area. Visibilities of 5 miles or better during the winter are observed nearly 80 percent of the time in the northern half and 90 percent of the time in the southern half. Summer brings slightly better visibility conditions; most regions within the study area observe 5 miles or better more than 90 percent of the time. Visibilities of 10 miles or better average from 40 to 50 percent of the time during the winter in the northern sections of the study area, and 60 to 80 percent in the southern sections. Although visibilities during the summer generally remain better than 5 miles, there is a significant decrease in the category of 10 miles or better along most of the coastal sections with percentages dropping 20 to 30 percent. There are visibilities of less than one mile generally 5 to 7 percent of the time in the northern portions of the study area, and 3 to 5 percent in the more southern ones, regardless of the season. Higher frequencies, however, are reported in the northeast regions encompassing Vancouver Island and Puget Sound, especially during the warmer months.

Clouds

A survey of the cloud data (total and low cloud amount) from the surface marine observation data base shows that the number of total cloud reports are significantly

greater than that of low cloud amount. This is because many of the early marine observations contain only total cloud amount. For the two presentations (total cloud amount $\leq$ 2/8, and low cloud amount $\geq$ 5/8), only those observations reporting both total and low cloud amount were summarized. This helps eliminate problems introduced as a result of different size data sets (N-count). The use of satellite data helps bolster confidence in the total cloud analyses because they show fairly close agreement with those analyses (U.S. Department of Commerce and United States Air Force, 1971).

The general cloud pattern changes little from season to season over most of the study area except for the near coastal waters of southwestern Canada and the northwestern United States.

Percent frequencies of low cloud amount greater than or equal to 5/8 usually range from less than 30 percent off the California coast to 70 percent in the northwest sections of the study area. During June and July these frequencies increase by 10 percent, but during October and November decrease over the northwestern section by 10 percent. Over the waters around Vancouver Island, low cloud amount $\geq$ 5/8 is observed as much as 60 to 70 percent of the time during the winter, and as little as 10 to 40 percent during September.

Total cloud amount of 2/8 or less reflect the opposite distribution of the low cloud conditions of 5/8 or more. Basically for 10 months of the year, frequencies range from under 10 to 20 percent over most regions except for the coastal waters of California and Vancouver Island where frequencies range from 30 to 50 percent. September and October are the two months that differ most as frequencies increase by nearly 10 percent in most regions.

Ceiling and Visibility

Aircraft-type ceilings are not available from marine observations. The ceilings are estimated from the height of the lowest cloud when low clouds cover more than half the sky. When the sky is totally obscured by rain, fog, dust, or other phenomena, the total obscuration is considered a ceiling with a height of zero. Mid-range ceiling and visibility charts (ceiling less than 1000 feet and/or visibility less than 5 nautical miles; ceiling less than 8000 feet and/or visibility less than 10 nautical miles) and low-range ceiling and visibility charts (ceilings less than 300 feet and/or visibility less than 1 nautical mile; ceiling less than 600 feet and/or visibility less than 2 nautical miles) are presented.

In examining the monthly frequencies of observations with ceilings less than 8000 feet and/or visibilities less than 10 nautical miles, little change is noted from season to season, therefore it is difficult to relate the annual cycle to that of the mean synoptic pressure systems, as it was for the cloud pattern. In general the best conditions, i.e., lower frequencies, are found in the southeast quadrant off the California coast, an area most influenced throughout the year by the subtropical high. Winter frequencies average less than 60 percent in all regions off the California coast and, in some areas, less than 40 percent. Summer observations reflect the higher occurrences of fog, as warm moist Pacific air flows across the cold ocean current, forming fog banks that move on shore. During August and September frequencies increase to over 60 to 70 percent in some areas off southern California. The other three quadrants generally have frequencies in the range of 60 to 80 percent throughout the year with the higher frequencies occurring in the northwest quadrant.

The percent frequencies of ceilings less than 1000 feet and/or visibilities less than 5 nautical miles produce a pattern similar to the higher threshold just discussed. Frequencies of over 35 percent are observed in the extreme northwest corner throughout each month with frequencies exceeding 45 percent in both the winter and summer. Along the southern California coast, frequencies are observed near 15 to 20 percent of the time from December through May, with increases to over 30 percent during July and August. Off the Washington and Oregon coasts, frequencies range from just over 40 percent during December and January to under 20 percent in May. In both the northeast corner (near Vancouver Island) and southwest corner, monthly frequencies consistently range from 15 to 25 percent.

As in past studies, the frequency patterns are very similar between the lower two threshold presentations of ceiling and visibility. Of observed cases for ceilings less than 600 feet and/or visibilities of less than 2 nautical miles, April has the smallest percent of occurrences. April has frequencies at this threshold of less than 10 percent along the coast and in the region south of 40°N with even a few locations within this

area reporting frequencies of less than 5 percent. Highest frequencies are observed in the northwest section where frequencies generally run in excess of 20 percent. The highest observed frequencies appeared in this region on the January chart, and off the northern California coast in August as frequencies exceeded 25 percent.

The selected threshold of ceilings of less than 300 feet and/or visibilities of less than 1 nautical mile is significantly influenced by the summer coastal fog. Winter and spring frequencies range from lows of less than 2 to 4 percent in the southern sections and the Strait of Georgia to over 12 to 16 percent in the northwest sector.

Summer and early fall reflect the marked increase in coastal fog as percentages along the California coast increase to over 22 percent by August. During these months slight increases appear near Vancouver Island and slight decreases across the central and northwestern sections.

Wave-Heights

Wave-heights have been recorded in a consistent quantitative code since the late 1940's. The reluctance of many observers to take wave observations in the earlier years and the difficulty in estimating waves, especially in confused seas, make wave observations one of the least commonly observed elements. The observations are also subject to biases. Generally the heights are too low, the periods too short, and the sea-swell discrimination poor (Quayle, 1980). The data in this study have not been adjusted for the suspected biases but were processed through a quality control procedure wherein an internal check was made between wind speed and sea height. The data were also matrix-arrayed and apparent erroneous outlier data values were deleted from both the sea and swell data. Wave-height presentations include isopleth maps showing percent frequencies of wave-heights $\geq$ 3 feet and $\geq$ 8 feet. In addition, wave-height tables by one-degree square show frequencies by six wave-height categories. In these presentations, the higher of the sea or swell was selected for summarization. If heights were equal, the wave with the longer period was selected.

Wave heights of 3 feet or more are observed better than 90 percent of the time from November through March for all but the coastal regions, and for a somewhat larger area off the coast of California south of Point Arena. The remaining months show similar patterns with frequencies remaining above 80 percent except during mid-summer (July and August) where a few areas, in open water, have frequencies below 80 percent. Lowest frequencies are observed in the Strait of Georgia where frequencies generally run 10 to 30 percent. Frequencies off San Francisco Bay are much higher than those in the Strait of Georgia, but still less than those for most coastal regions where they usually average just under 60 percent.

The percent frequency of wave heights of 8 feet or greater produce a pattern similar to that of the mean wind speeds. From October through March, the highest occurrences are observed in the northwest corner of the study area where frequencies reach better than 60 percent. Much lower frequencies are observed along the coast with the lowest frequency of occurrences again falling within the Strait of Georgia at less than 5 percent. By April, the frequency pattern begins to change, although the highest and lowest frequencies are still observed in the same general regions as in winter. By June, however, the pattern transformation has been completed as 8 feet or higher waves are observed, most often, at 30 to 35 percent of the time, in an area centered some 200 to 300 miles off the California coast. This pattern remains through August, then, by September, the shift to the wintertime pattern takes place.

Ocean Currents

The ocean current charts were compiled from ship drift reports that were forwarded by the various merchant marines to the U.S. Naval Oceanographic Office. From those drift observations, the prevailing and secondary current directions, mean current speed, percent of total observations used to compute the primary and secondary directions, and the total observation count are presented by one-degree square. This information is presented on monthly charts with the study area being divided into two sections (pages) to ensure readability. The density of the observations is greatest along the major shipping routes and the reliability of the current charts is best in those areas. The data are considered most useful when used collectively, such as in summaries where a large number of observations are available.

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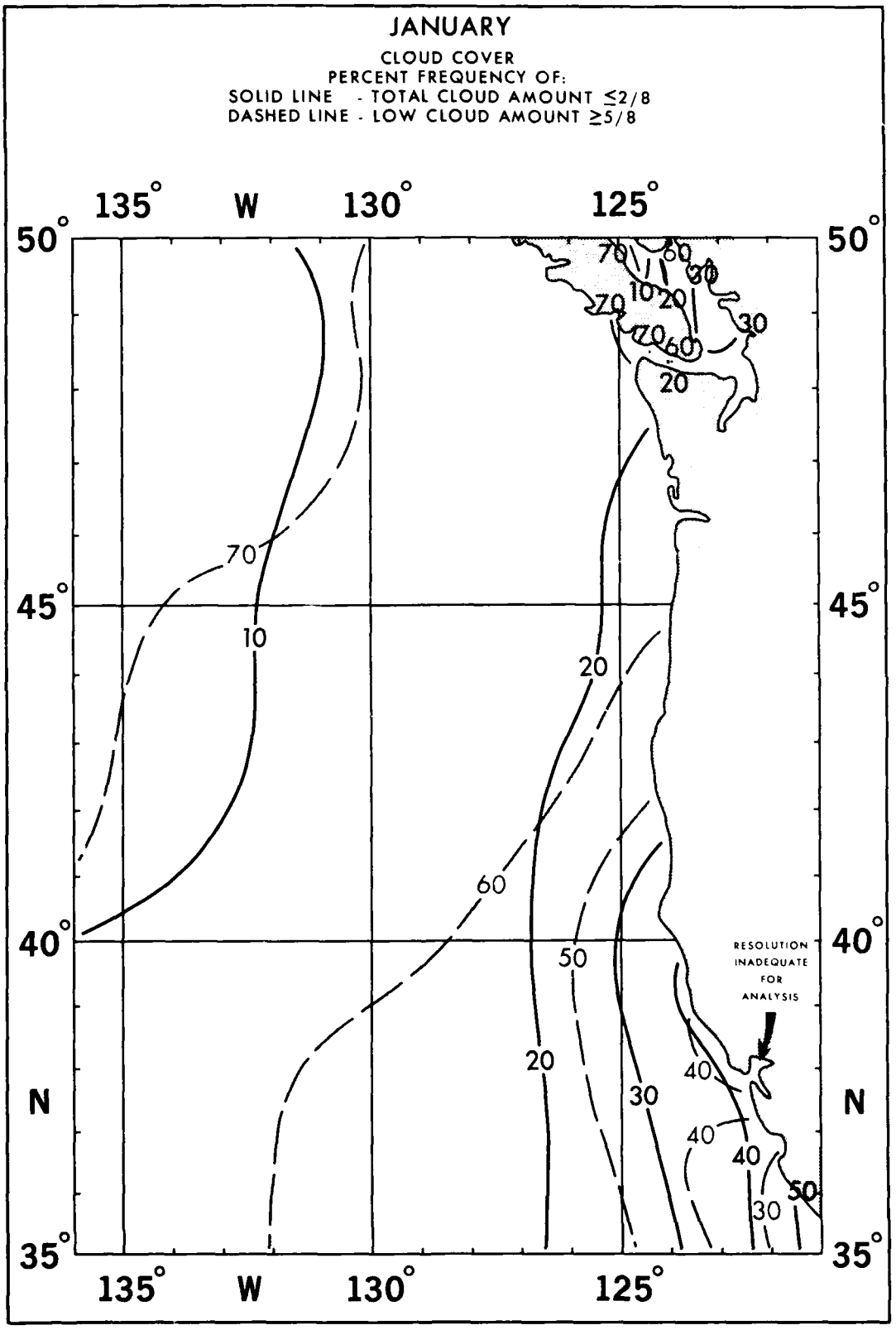
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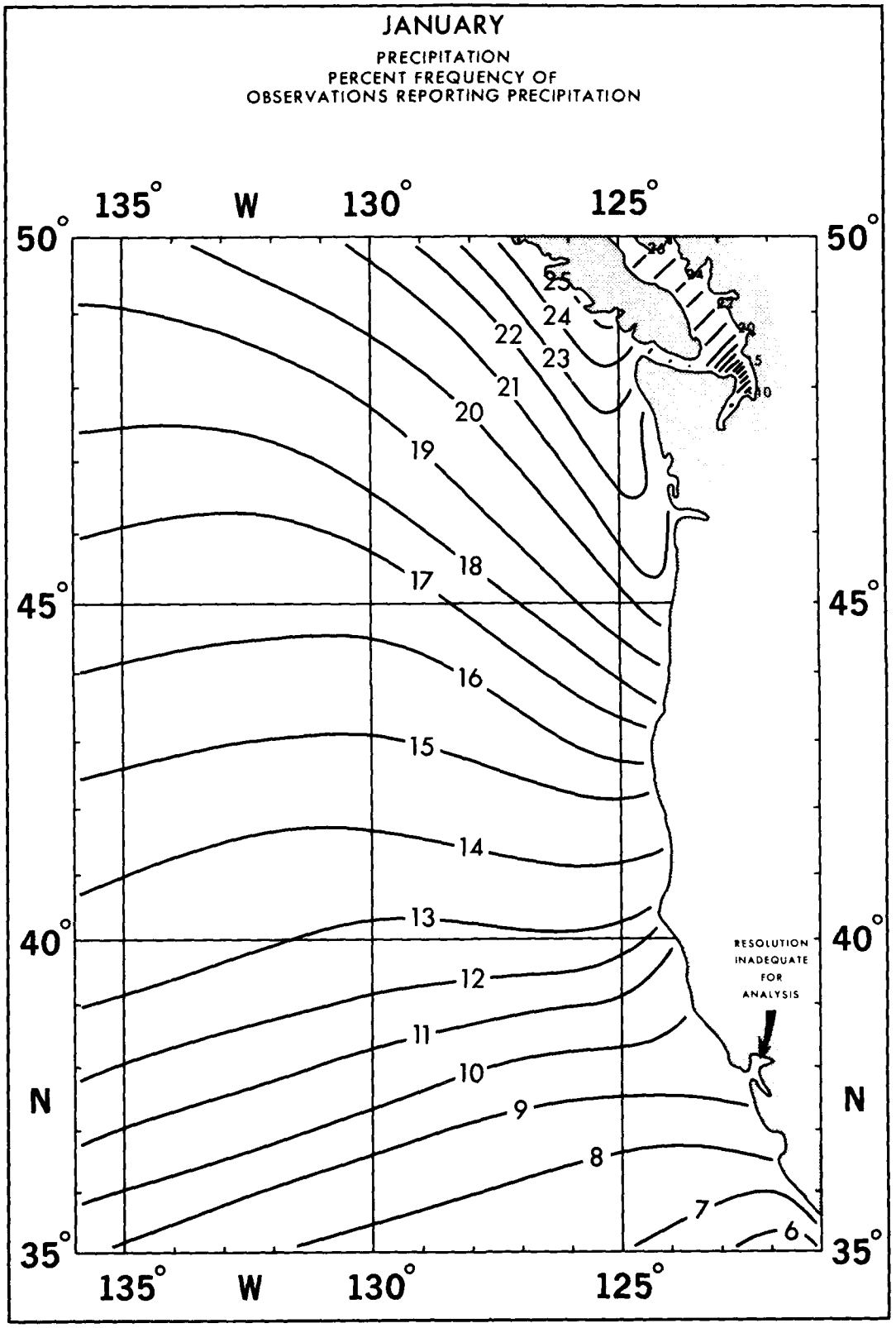
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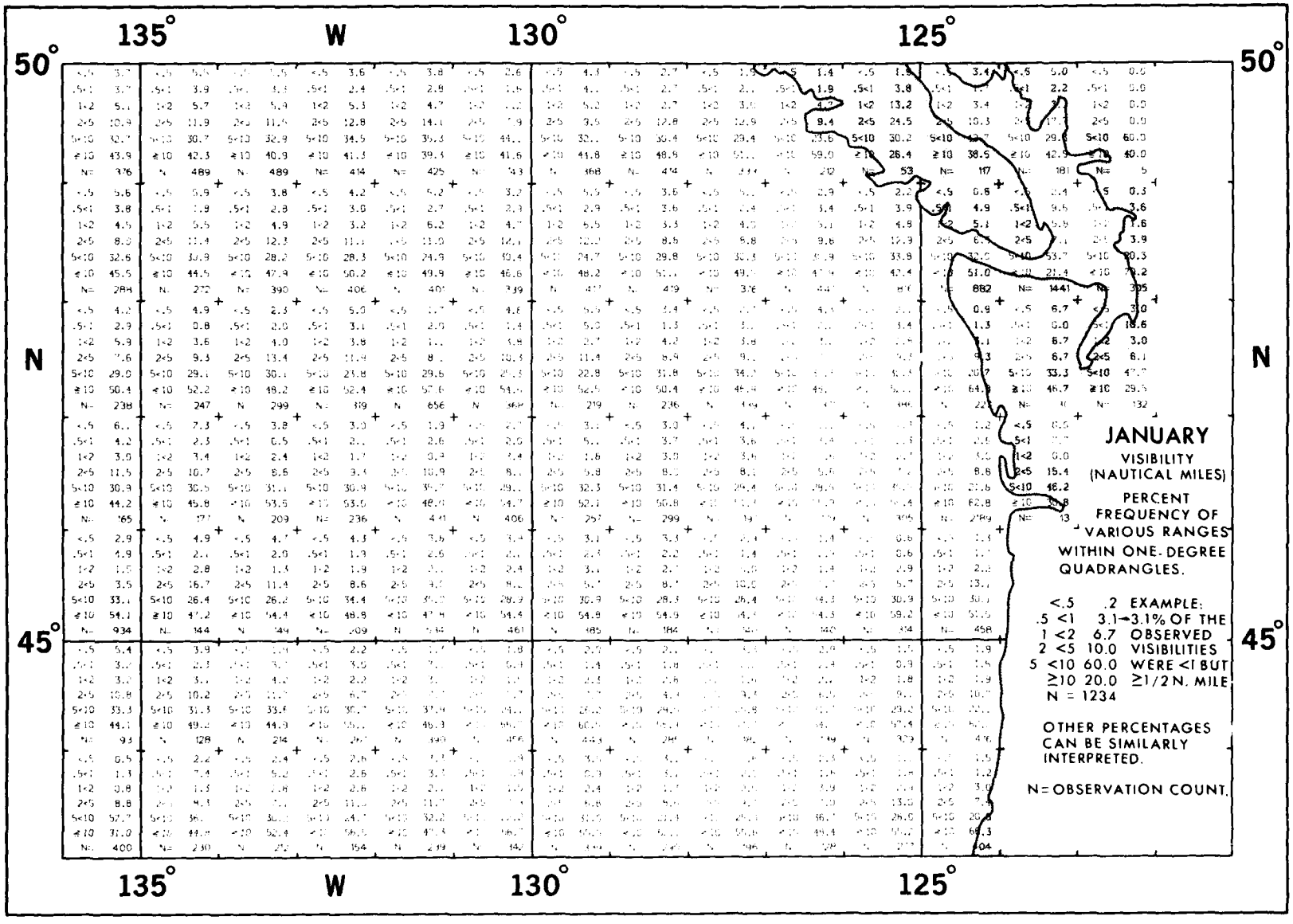
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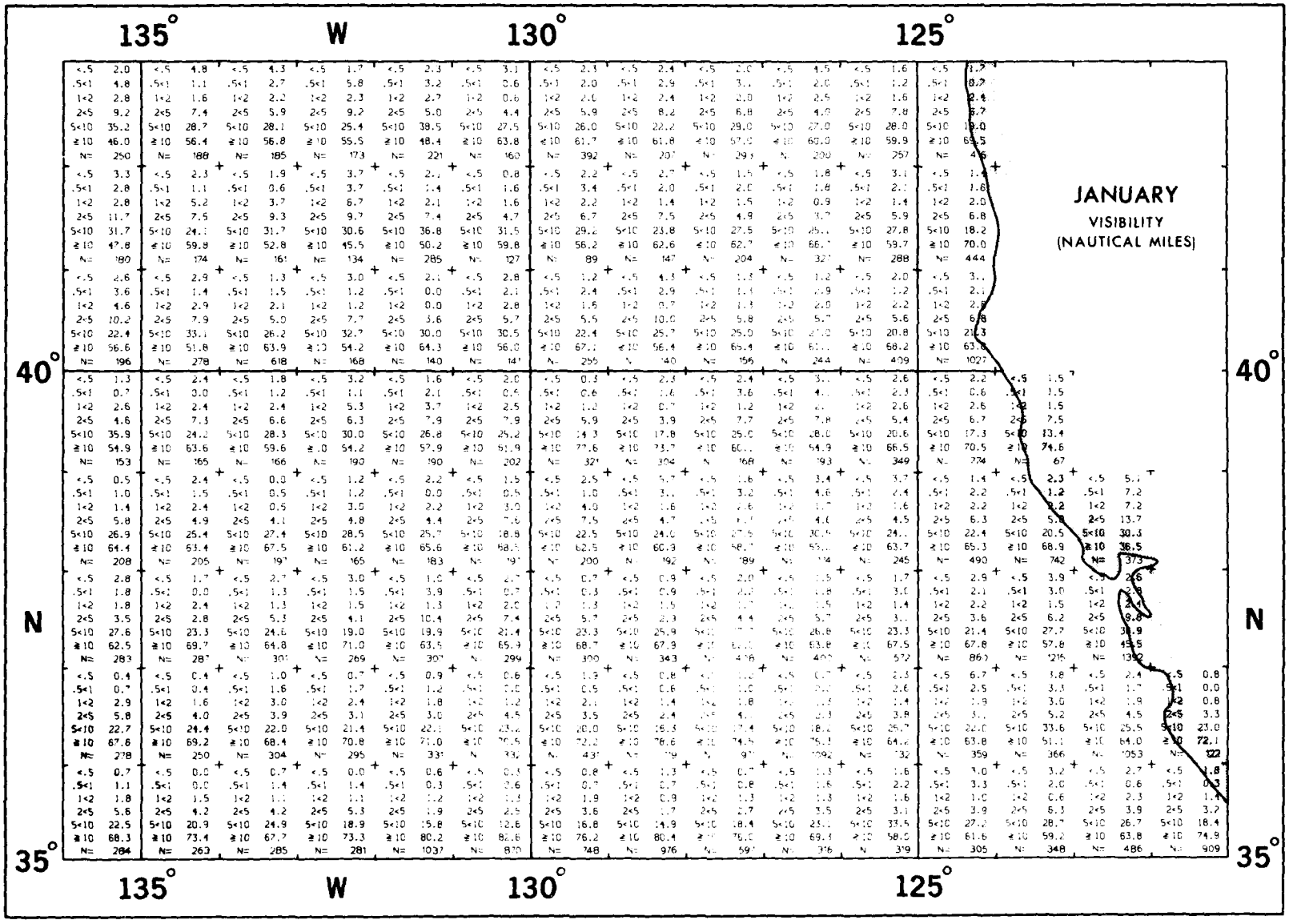
EXAMPLE: The 'MEAN SCALAR WIND SPEED' for July is found on page 129.

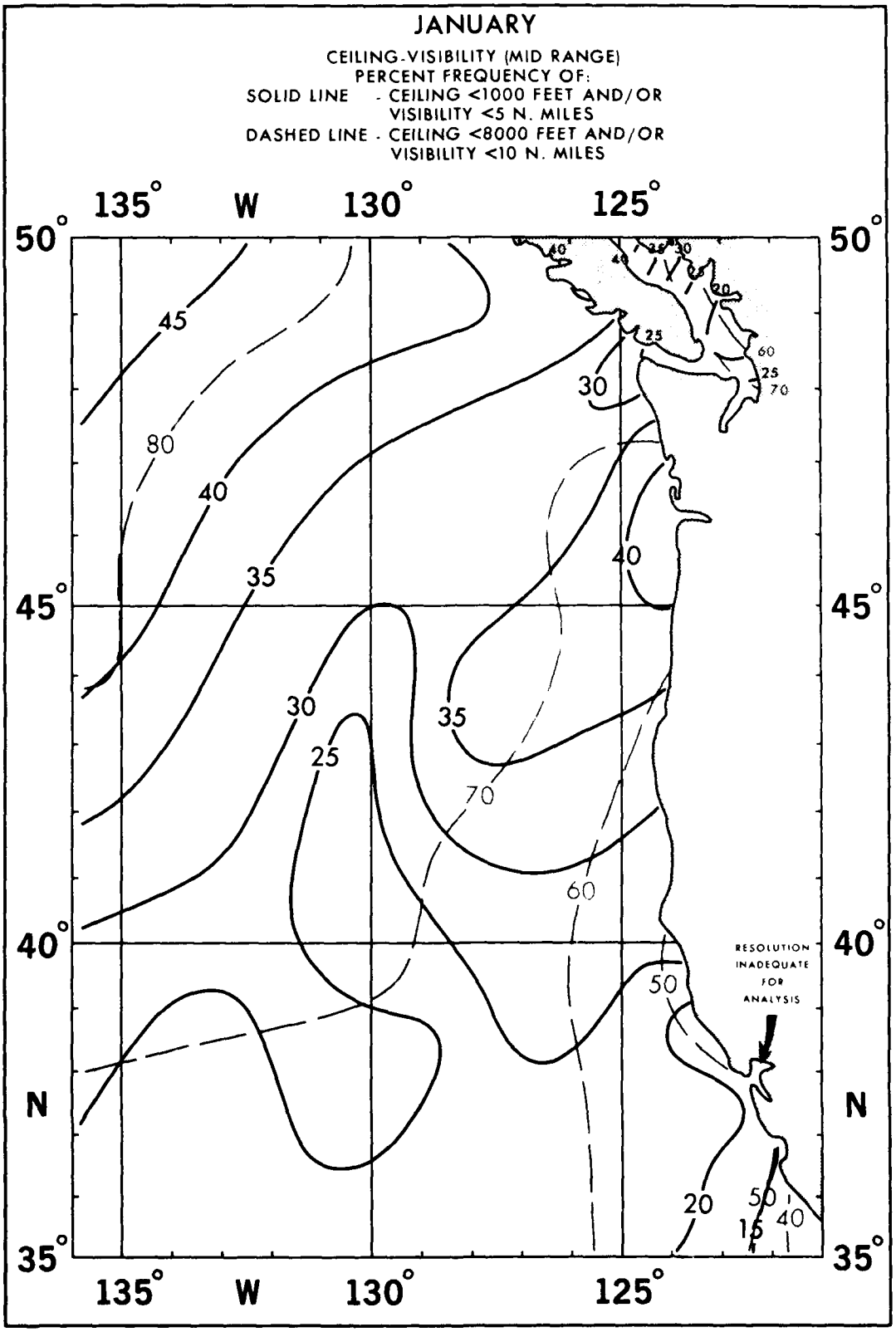
MONTH / ELEMENT	CLOUDS	PRECIPITATION	VISIBILITY-TABLES	CEILING-VISIBILITY (MID RANGE)	CEILING-VISIBILITY (LOW RANGE)	WIND-VISIBILITY-CLOUDINESS	MEAN SCALAR WIND SPEED	WIND SPEED <11 and ≥34 knots	WIND SPEED 11-21 and 22-33 knots	SURFACE WIND ROSES	MEAN AIR TEMPERATURE	MEAN SEA SURFACE TEMPERATURE	WAVE HEIGHT-TABLES	WAVE HEIGHT-ISOPLETHS	MEAN MIXED LAYER DEPTH	SURFACE CURRENTS	STATION CLIMATIC SUMMARIES
JANUARY	2	3	4	6	7	8	9	10	11	12	14	15	16	18	19	20	242
FEBRUARY	22	23	24	26	27	28	29	30	31	32	34	35	36	38	39	40	
MARCH	42	43	44	46	47	48	49	50	51	52	54	55	56	58	59	60	
APRIL	62	63	64	66	67	68	69	70	71	72	74	75	76	78	79	80	
MAY	82	83	84	86	87	88	89	90	91	92	94	95	96	98	99	100	
JUNE	102	103	104	106	107	108	109	110	111	112	114	115	116	118	119	120	THRU
JULY	122	123	124	126	127	128	129	130	131	132	134	135	136	138	139	140	
AUGUST	142	143	144	146	147	148	149	150	151	152	154	155	156	158	159	160	253
SEPTEMBER	162	163	164	166	167	168	169	170	171	172	174	175	176	178	179	180	
OCTOBER	182	183	184	186	187	188	189	190	191	192	194	195	196	198	199	200	
NOVEMBER	202	203	204	206	207	208	209	210	211	212	214	215	216	218	219	220	
DECEMBER	222	223	224	226	227	228	229	230	231	232	234	235	236	238	239	240	

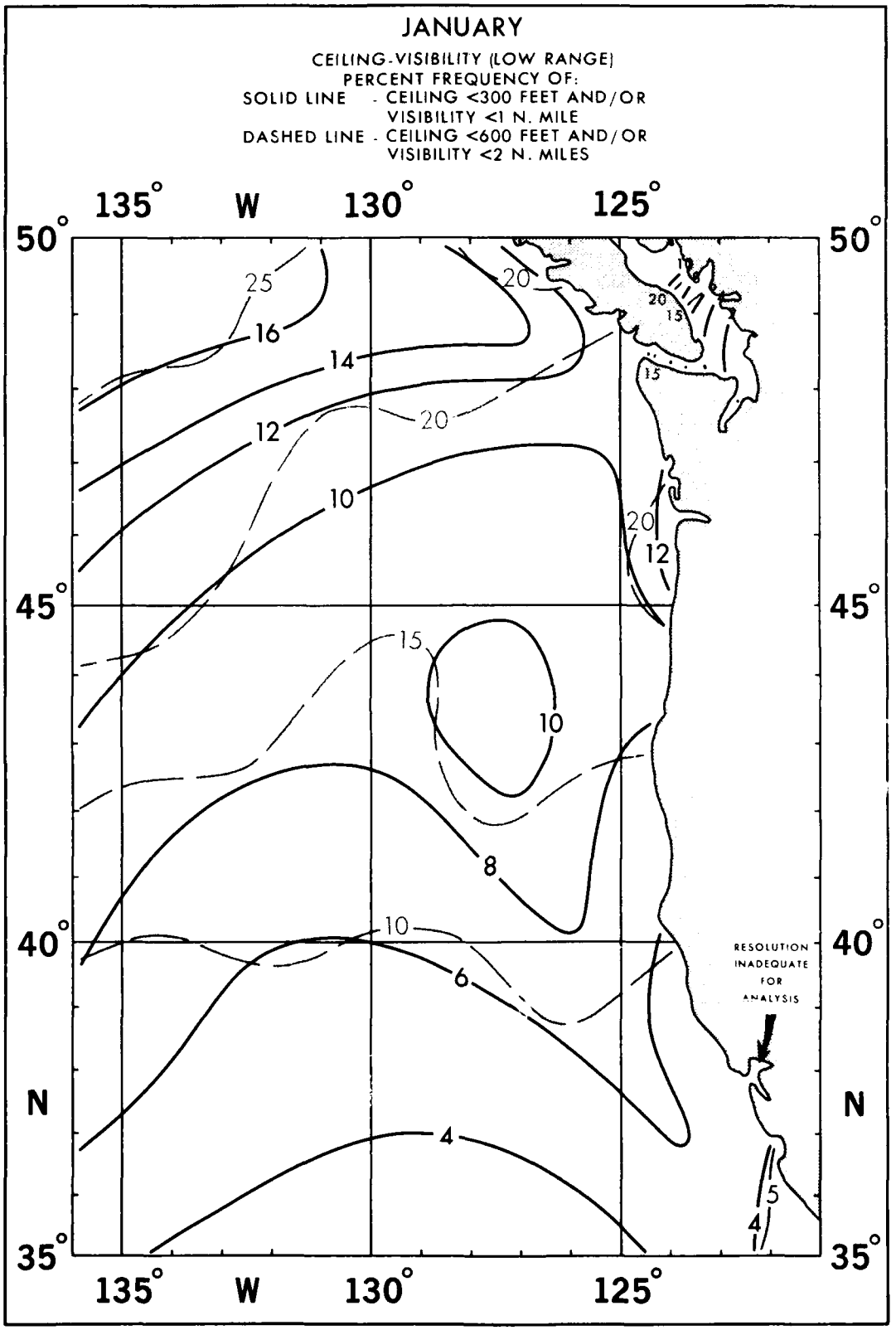

JANUARY
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
70
10
20
30
60
50
40
RESOLUTION INADEQUATE FOR ANALYSIS

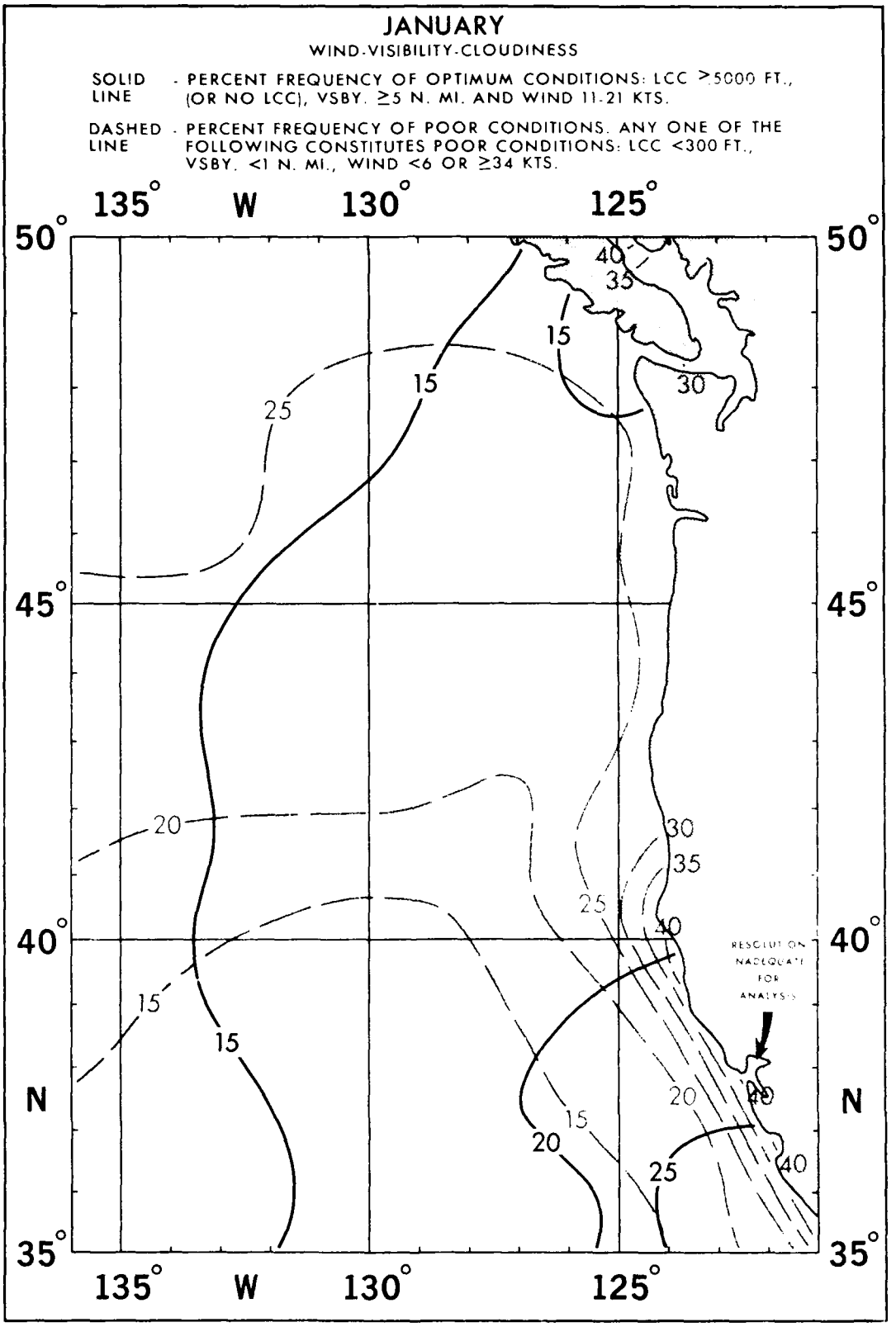

JANUARY
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
25
24
22
23
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
RESOLUTION INADEQUATE FOR ANALYSIS

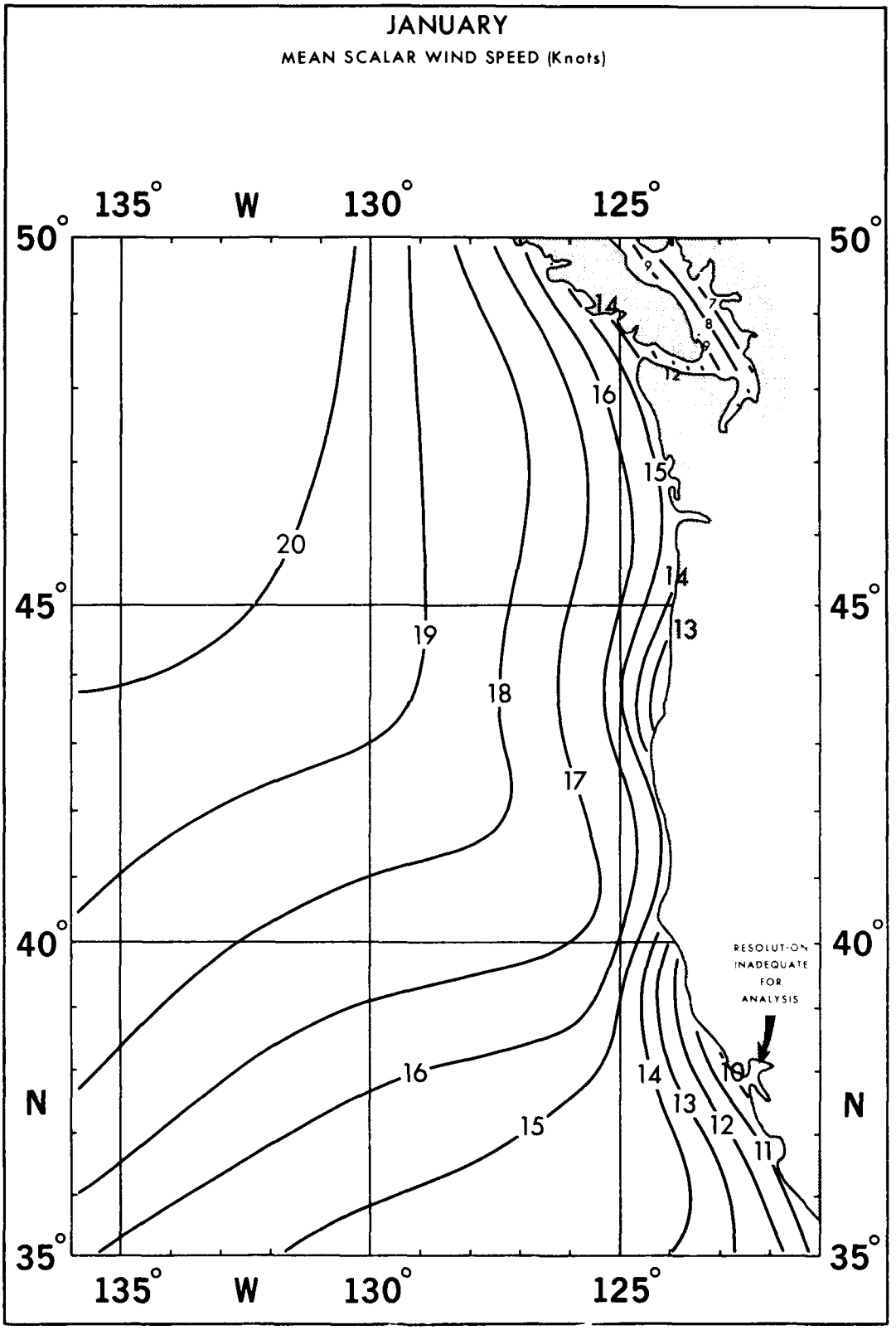

135° W 130° 125°
50°
45°
N
JANUARY
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N = OBSERVATION COUNT.

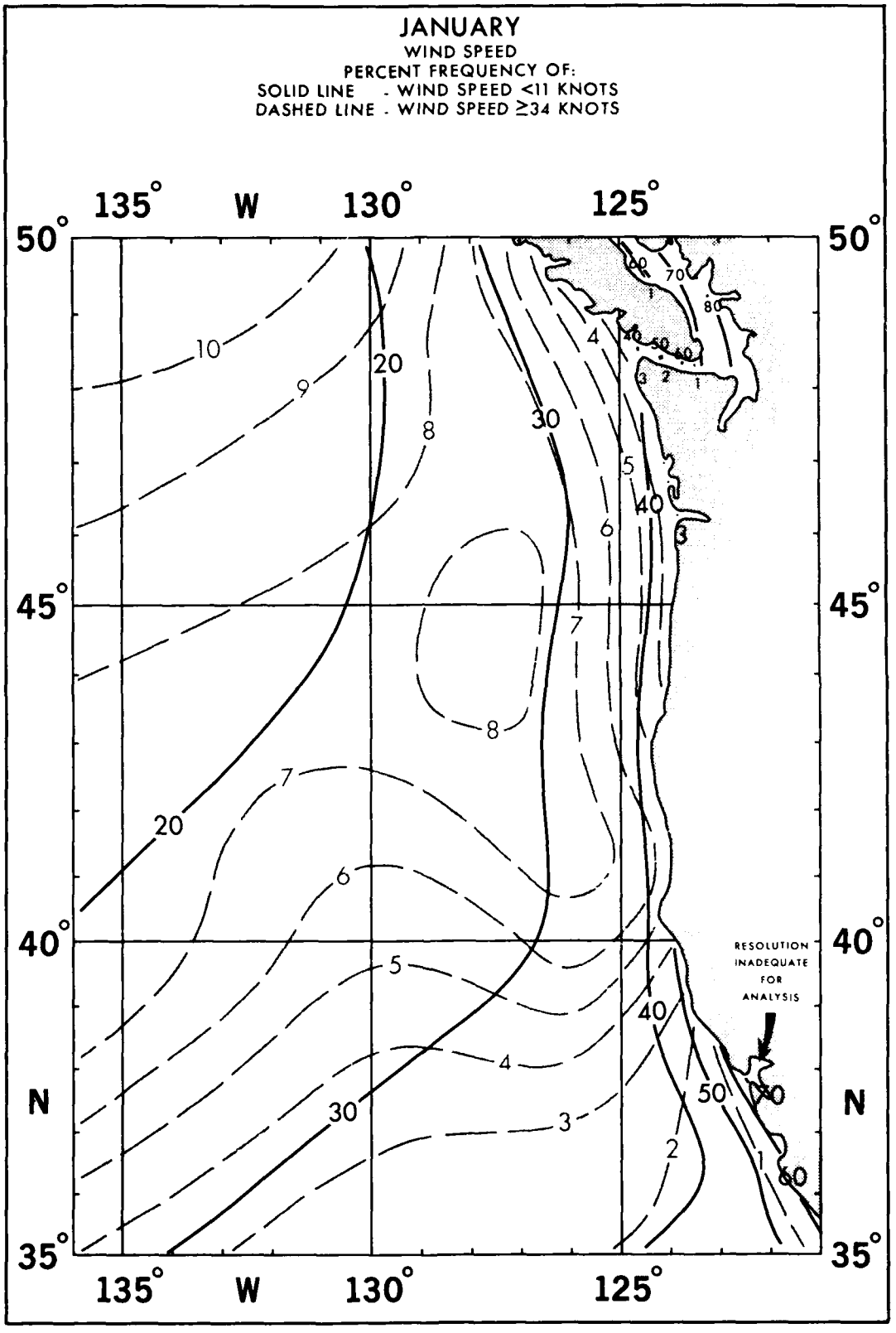

135° W 130° 125°
40°
N
35°
JANUARY
VISIBILITY
(NAUTICAL MILES)

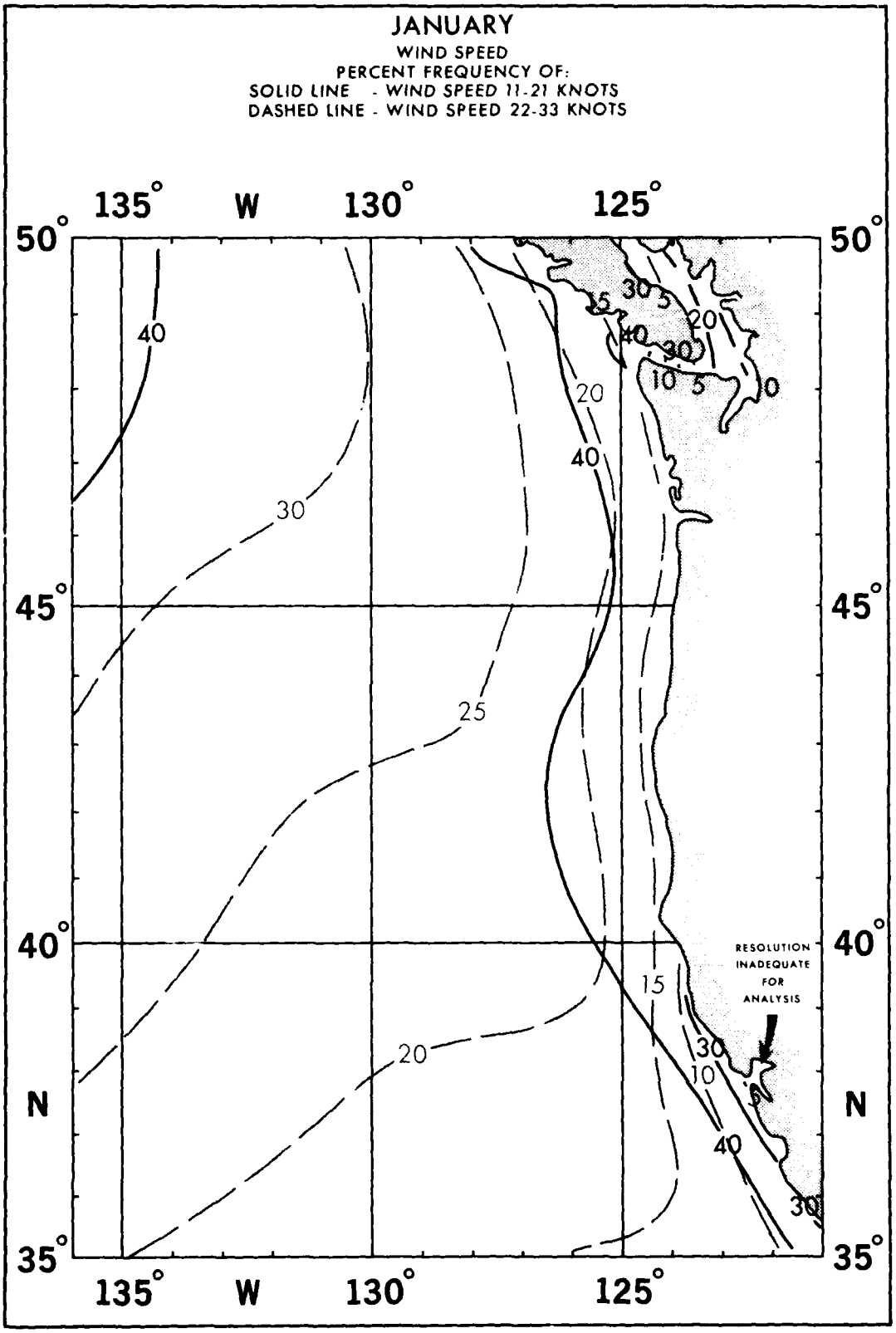

JANUARY
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

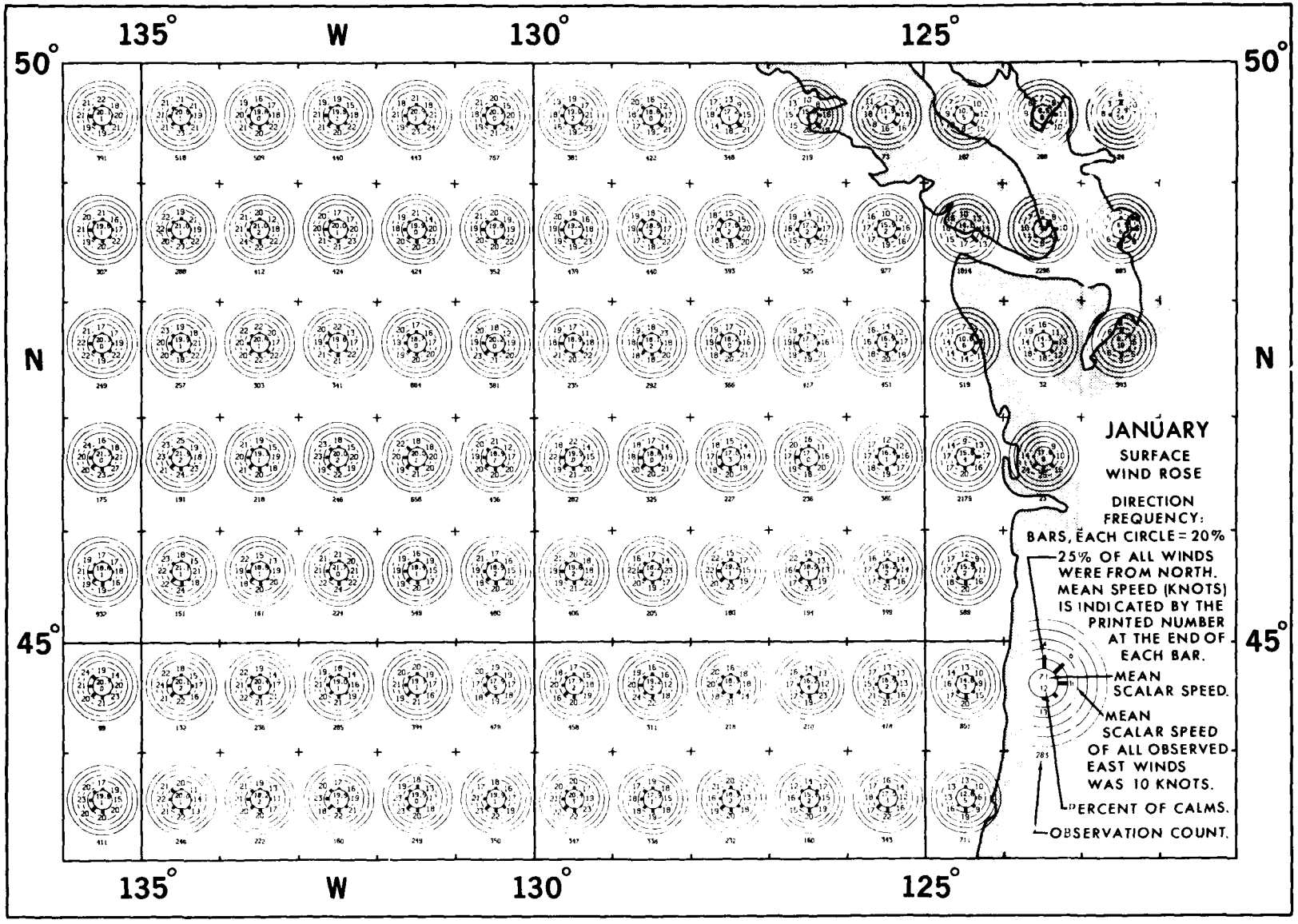

JANUARY
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

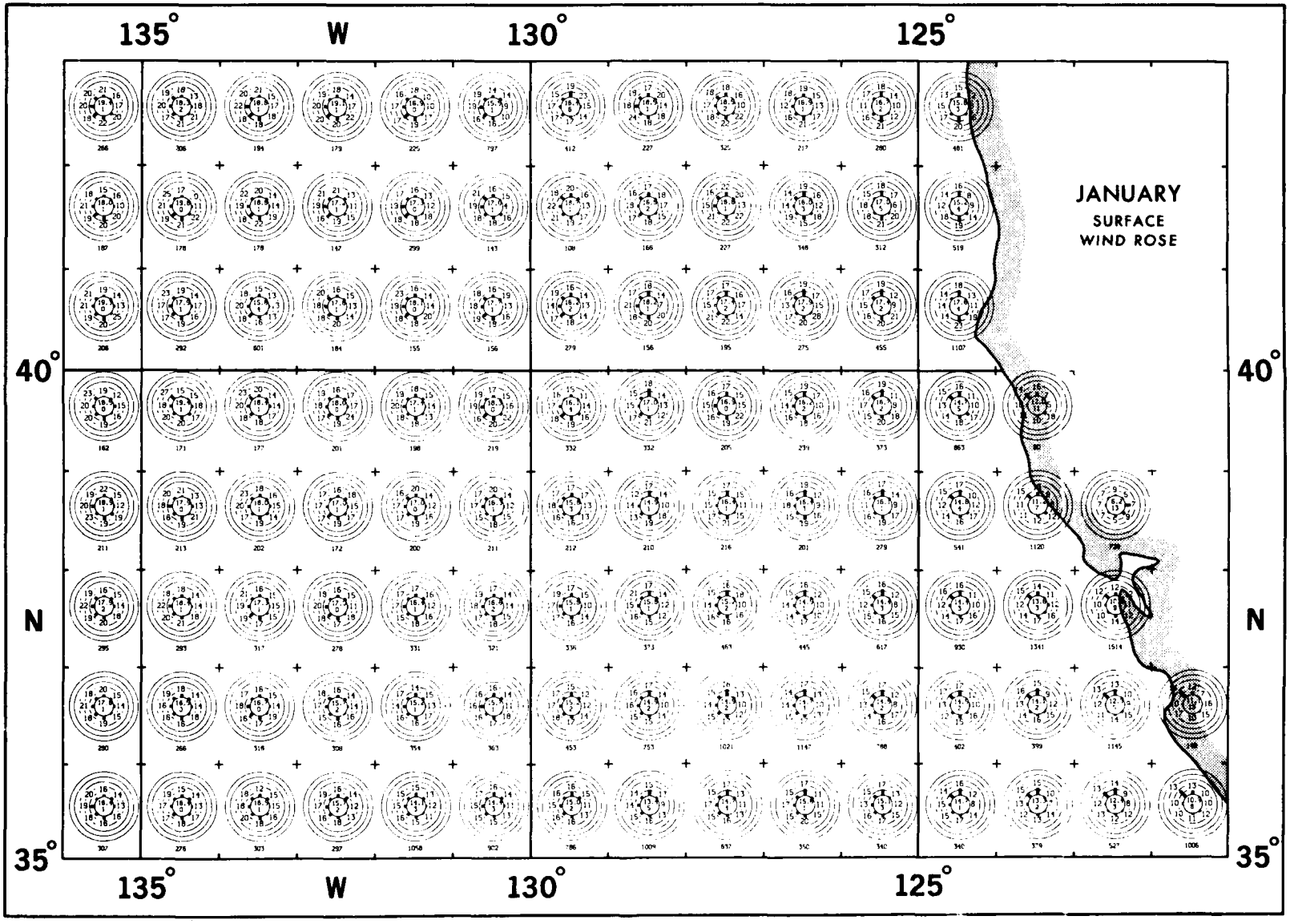

JANUARY
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC >5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
15
20
25
30
35
40

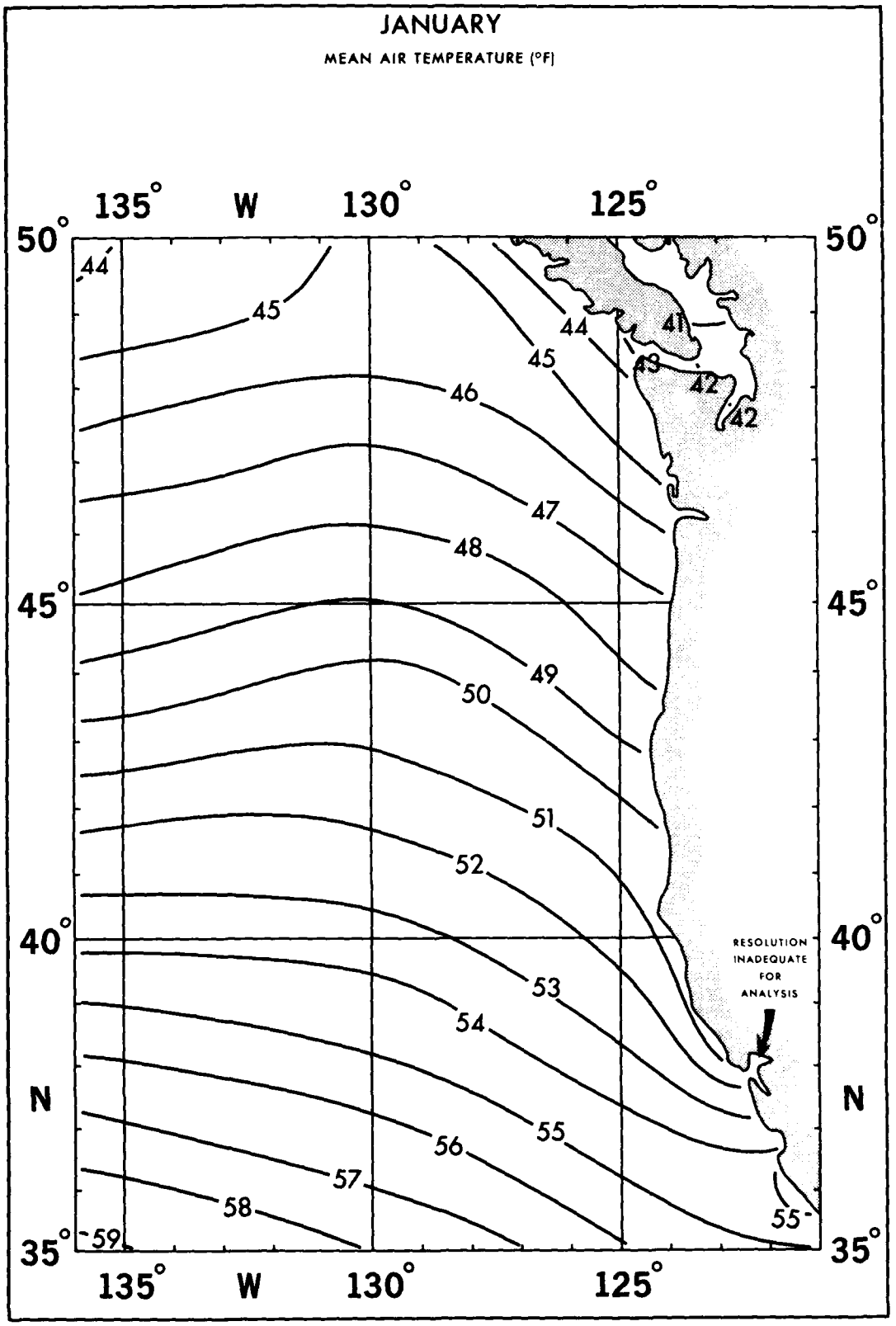

JANUARY
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
35°
N
20
19
18
17
16
15
14
13
12
11
10
9
8
7
RESOLUTION INADEQUATE FOR ANALYSIS

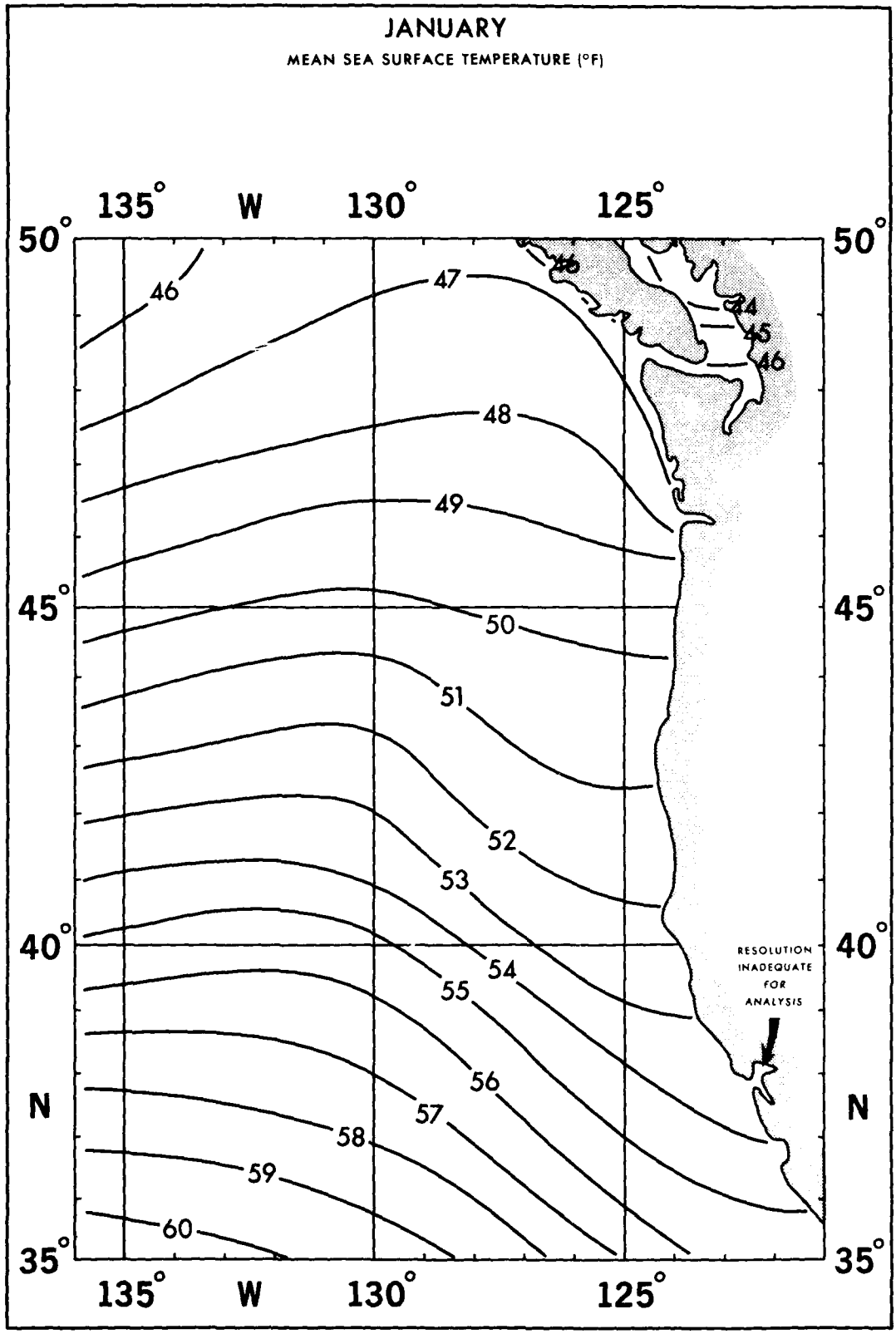

JANUARY
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

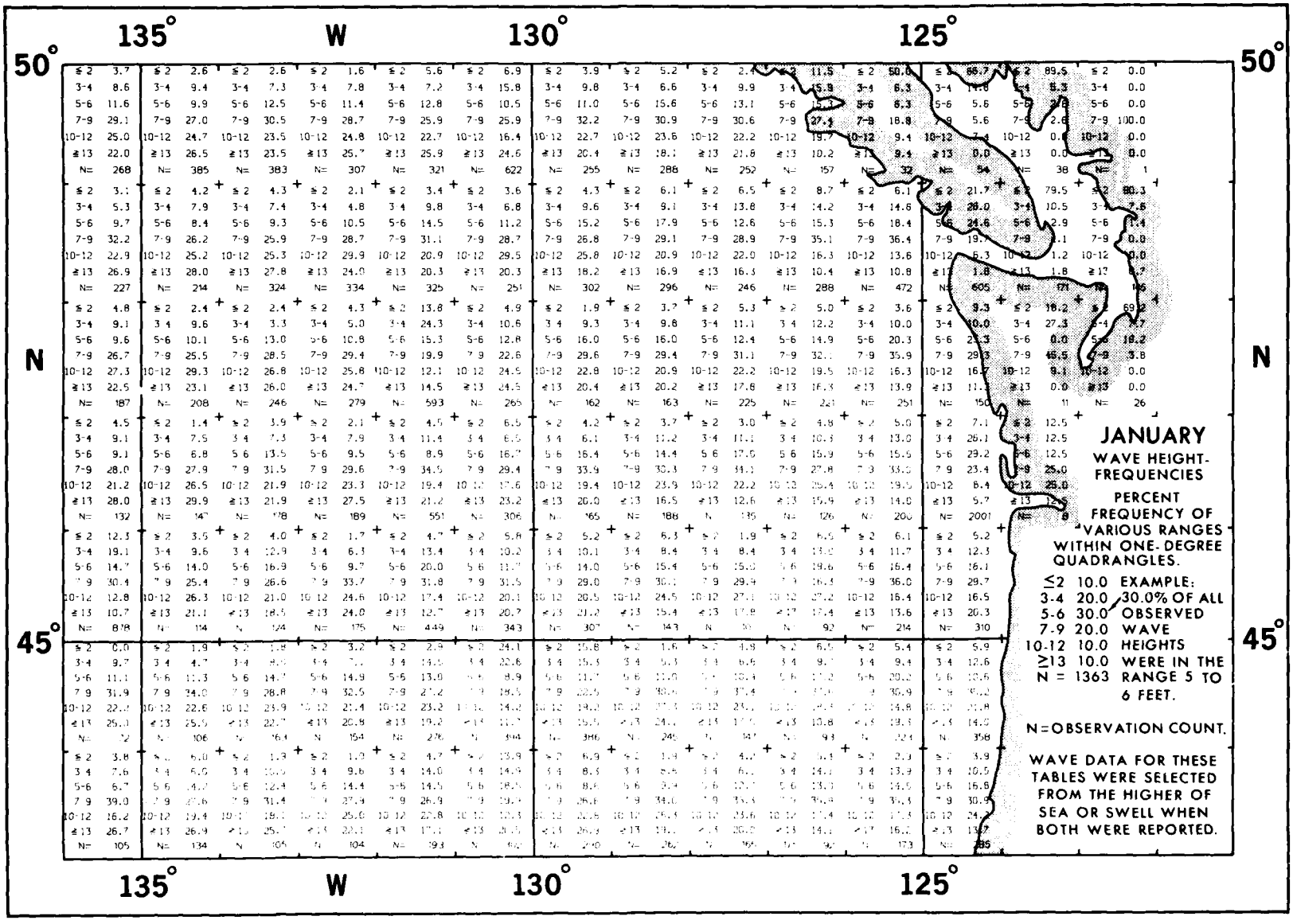

JANUARY
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
40
30
25
20
15
10
5
0
RESOLUTION INADEQUATE FOR ANALYSIS

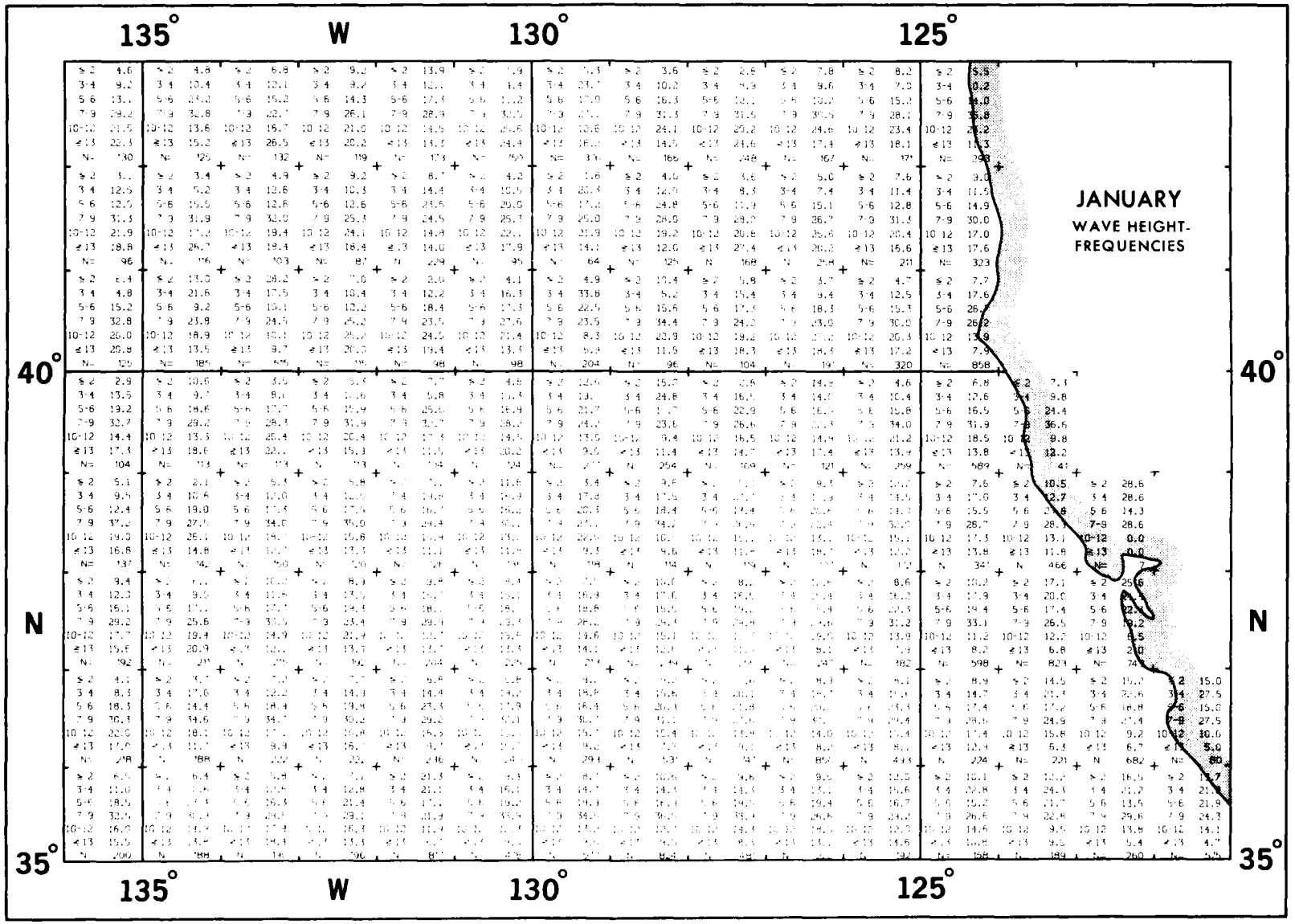

135° W 130° 125°
50°
45°
N
JANUARY
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

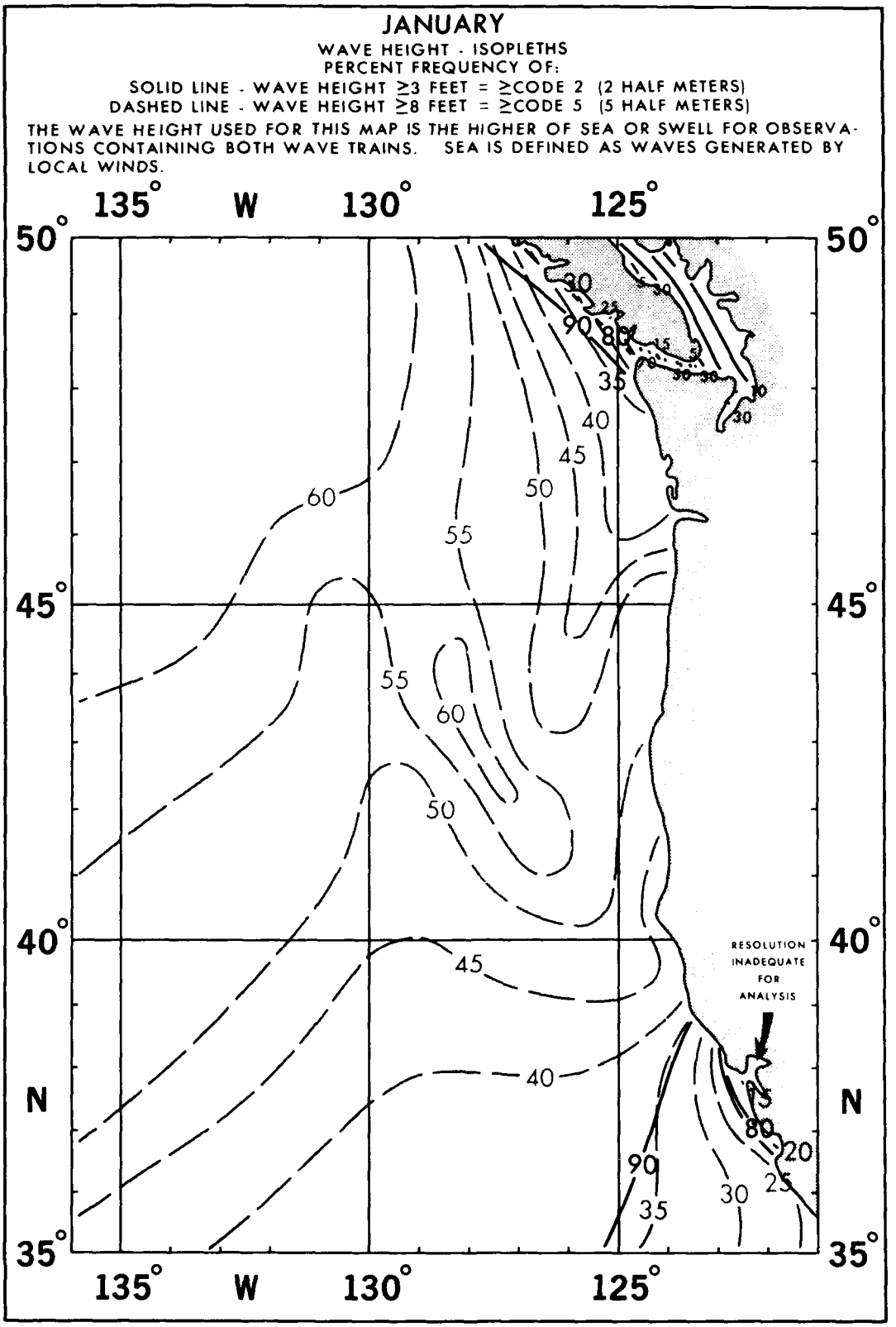

135° W 130° 125°
40°
N
35°
JANUARY
SURFACE
WIND ROSE

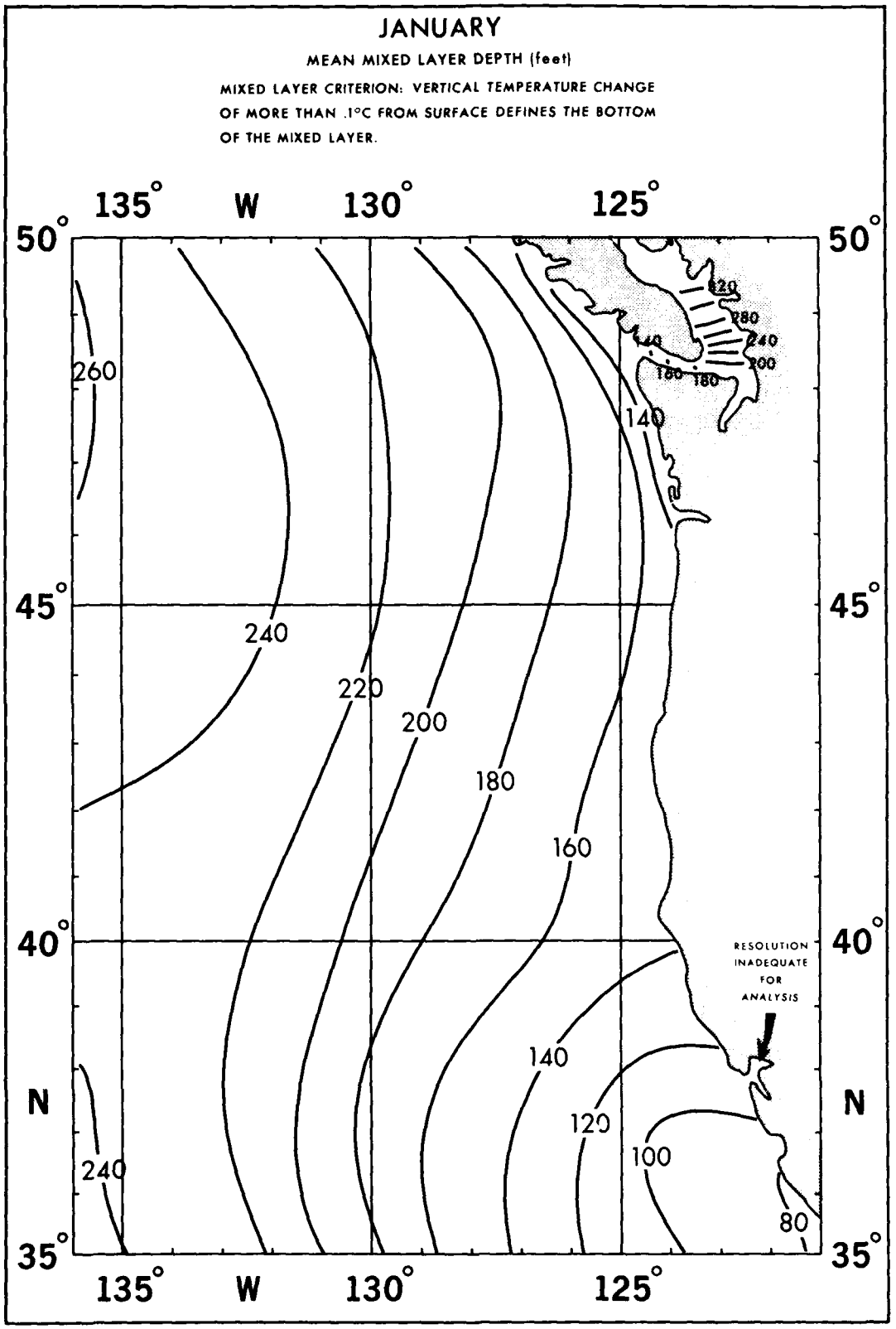

JANUARY
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
41
43
42
RESOLUTION INADEQUATE FOR ANALYSIS

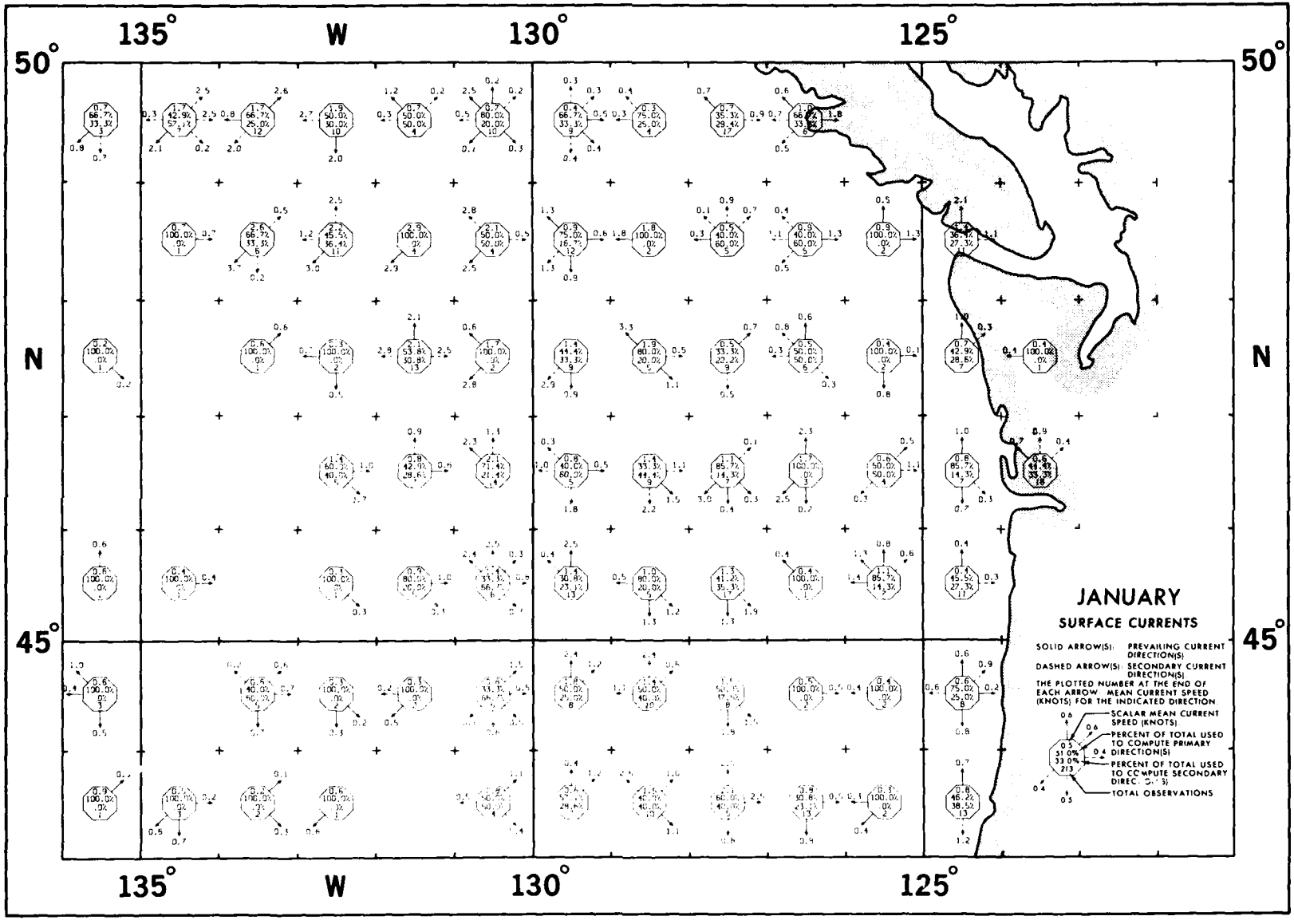

JANUARY
MEAN SEA SURFACE TEMPERATURE (°F)
135° W
130°
125°
50°
45°
40°
35°
N
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
44
45
46
RESOLUTION INADEQUATE FOR ANALYSIS

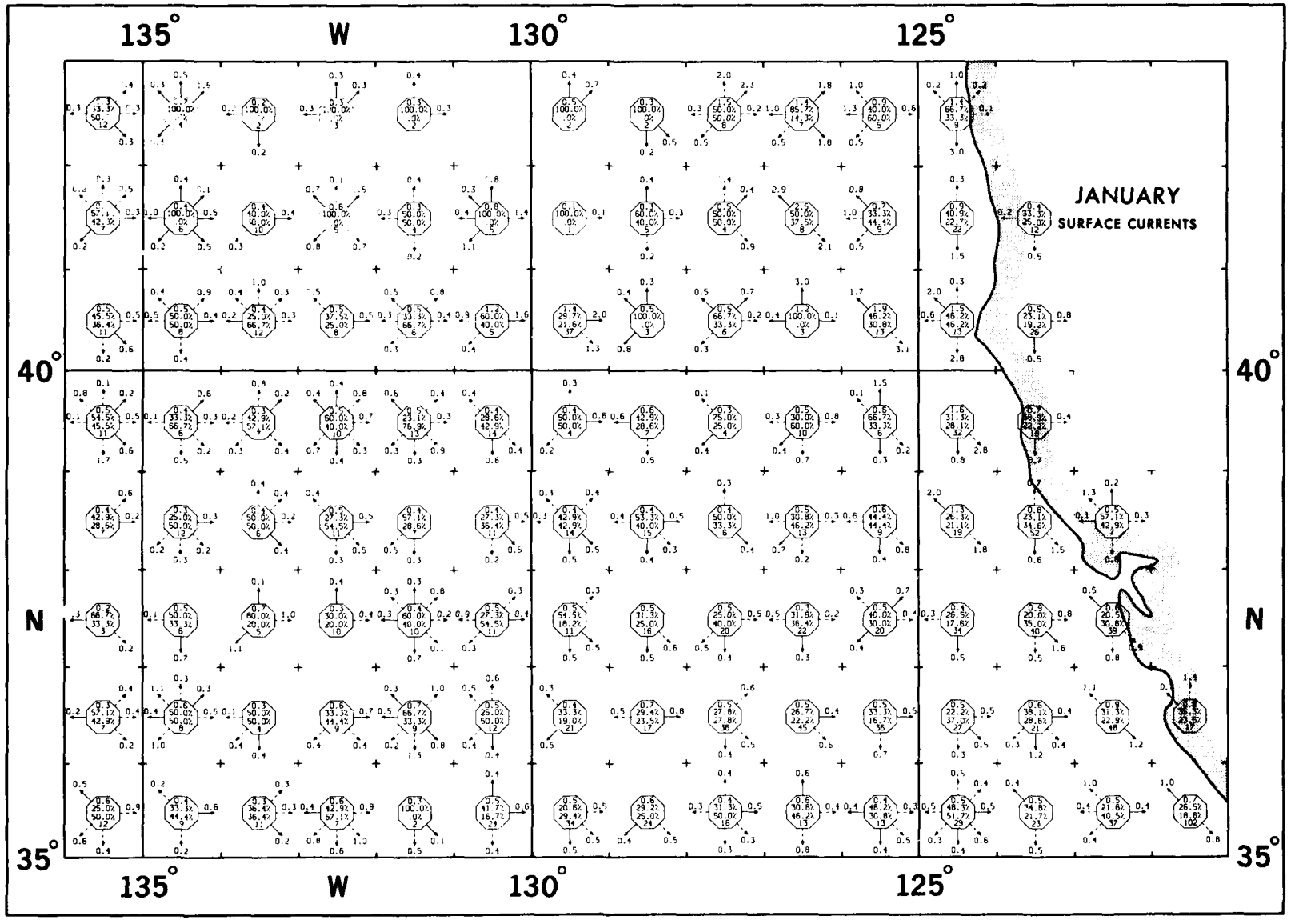

135° W 130° 125°
50°
45°
N
JANUARY
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

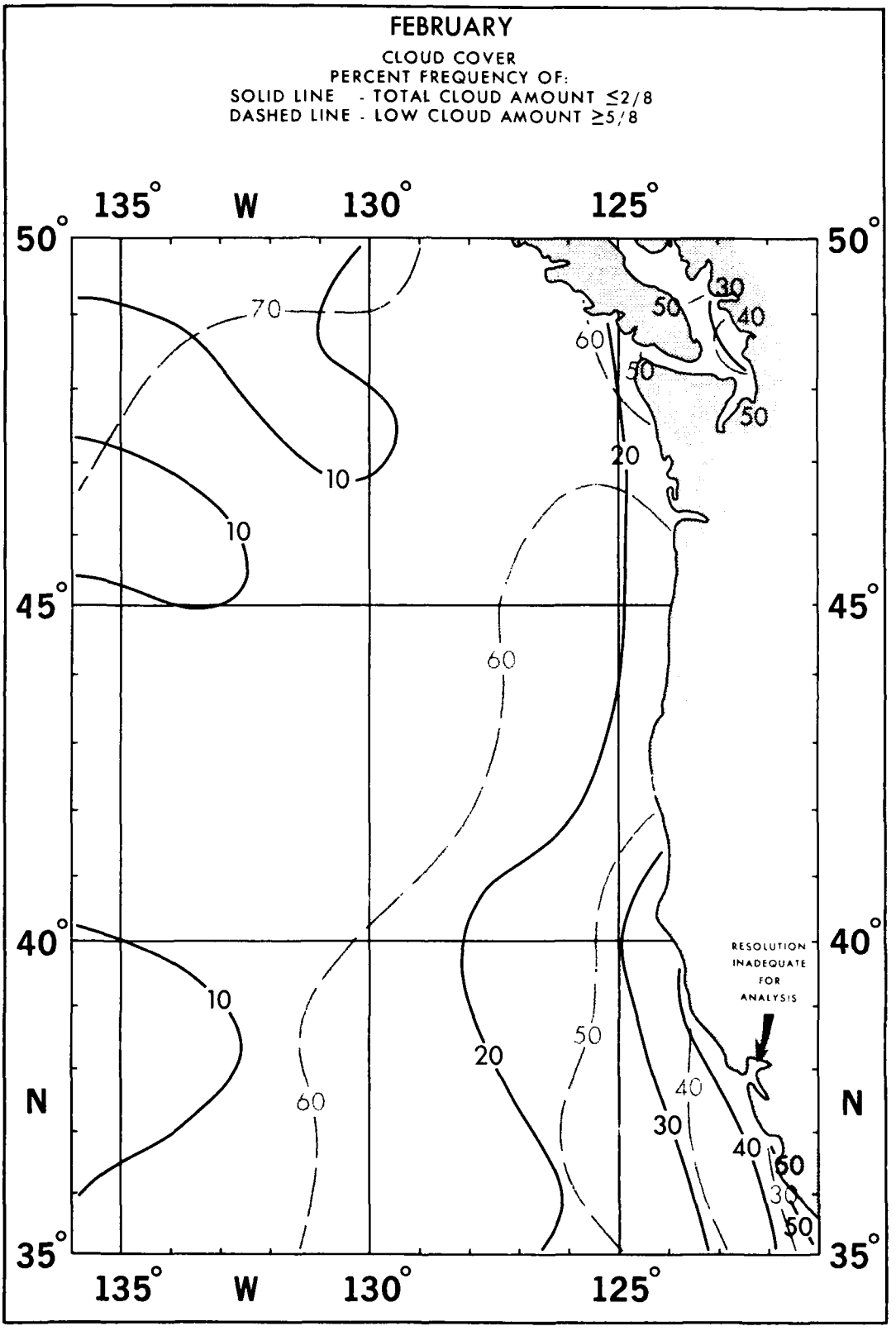

135° W 130° 125°
40°
N
35°
JANUARY
WAVE HEIGHT-
FREQUENCIES

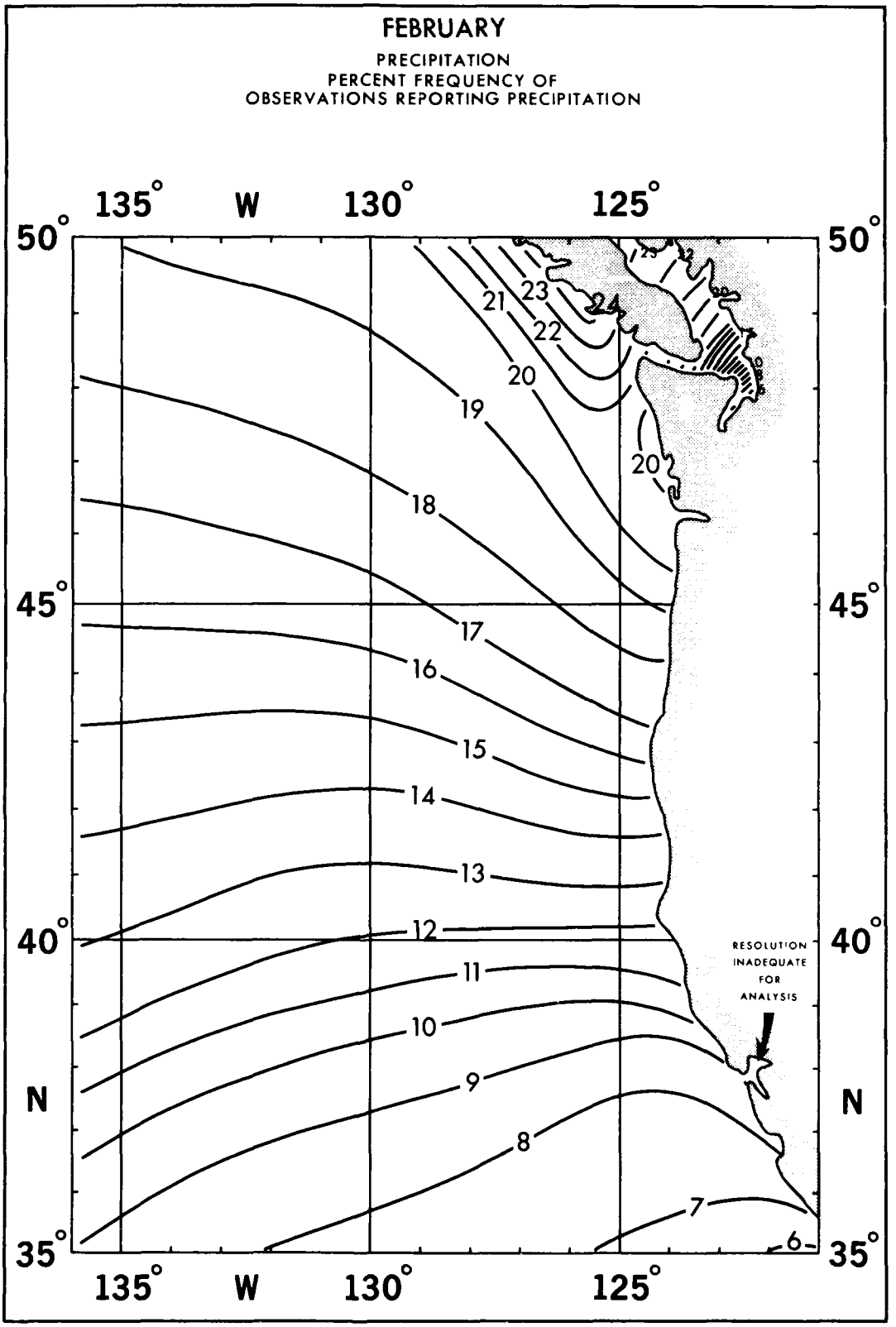

JANUARY
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
60
55
50
45
40
35
30
25
20
15
10
90
80

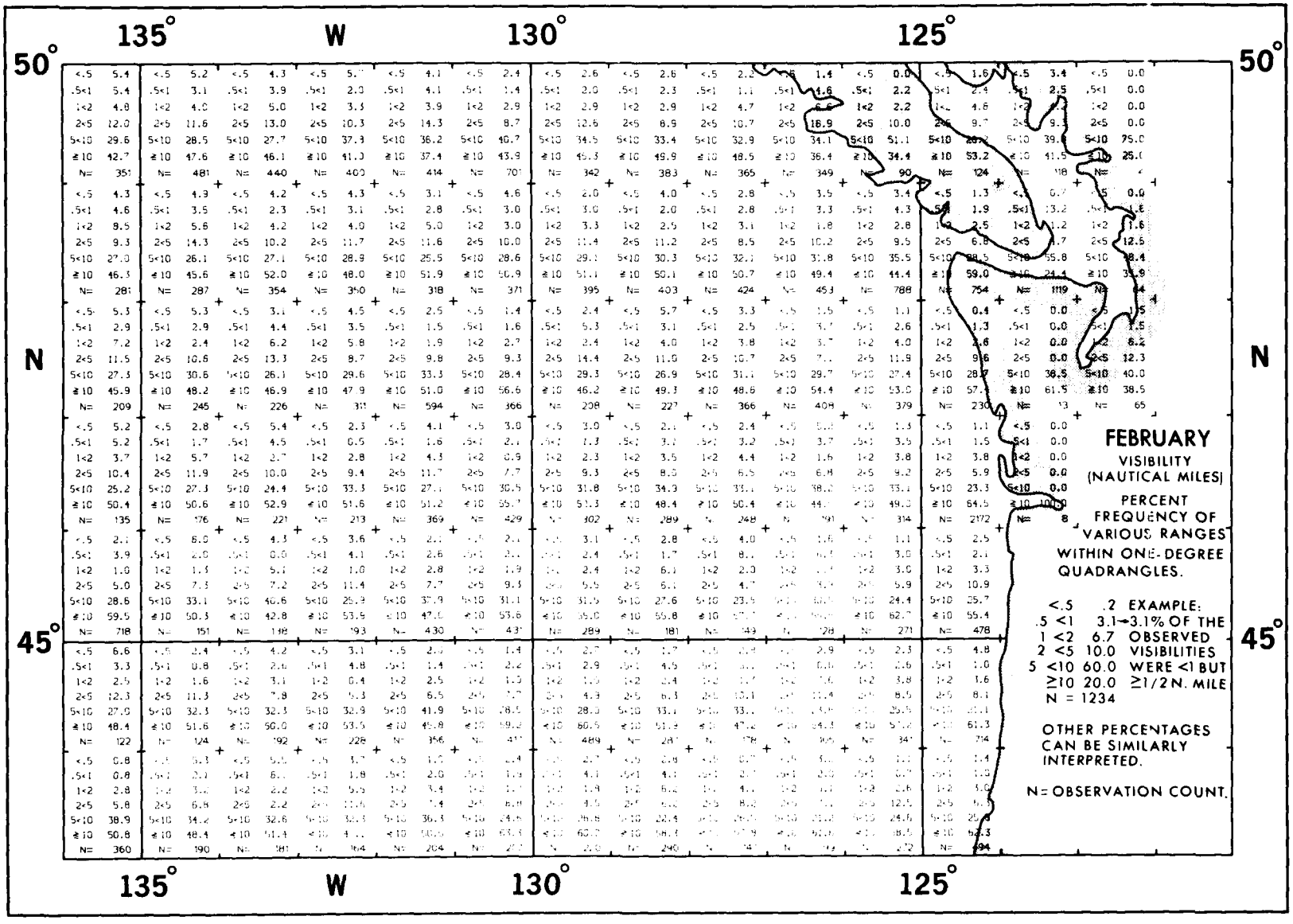

JANUARY
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W 130° 125°
50°
45°
40°
35°
N
260
240
220
200
180
160
140
120
100
80
RESOLUTION INADEQUATE FOR ANALYSIS

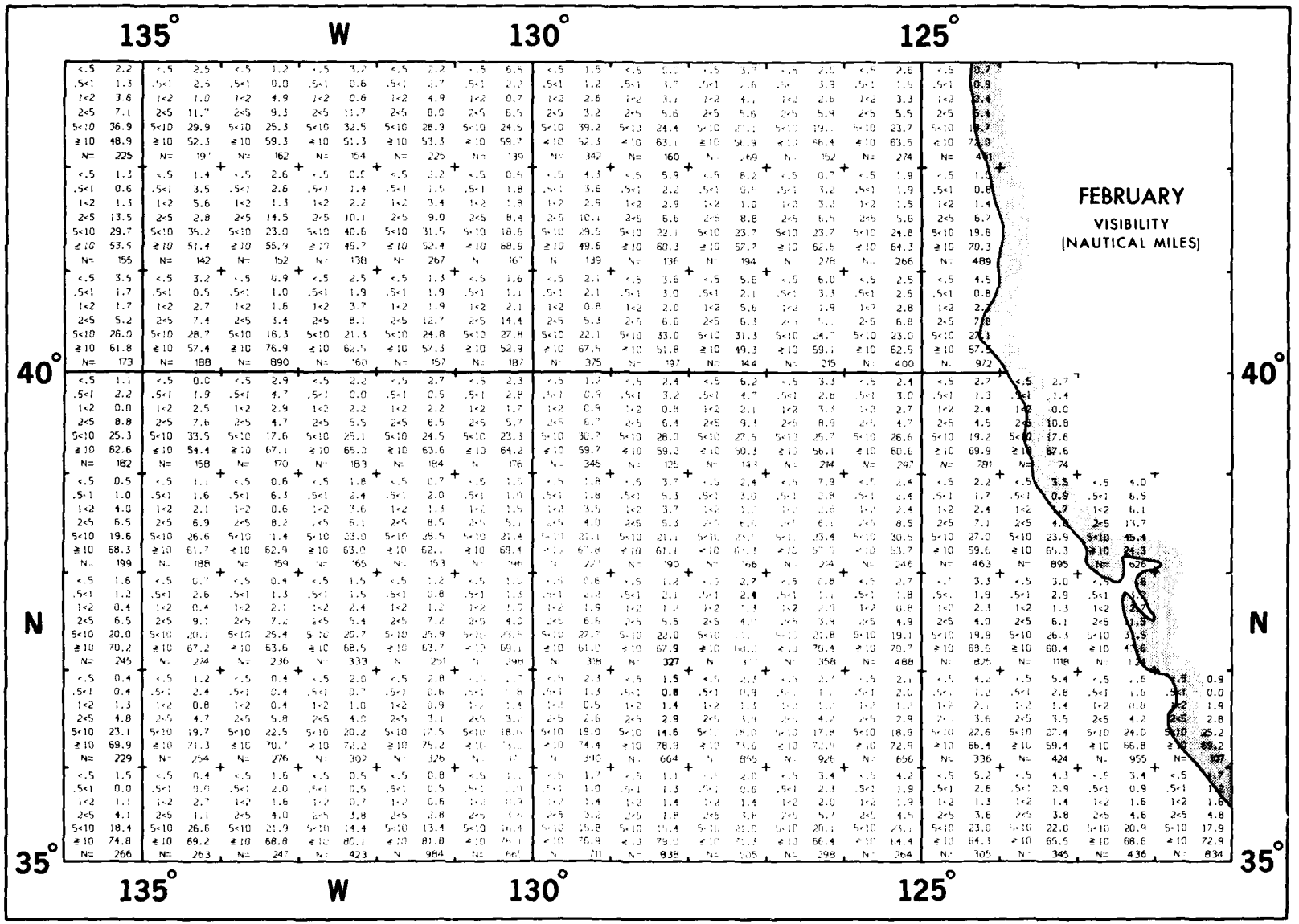

135° W 130° 125°
50°
N
45°
JANUARY
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION.
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIREC.
TOTAL OBSERVATIONS

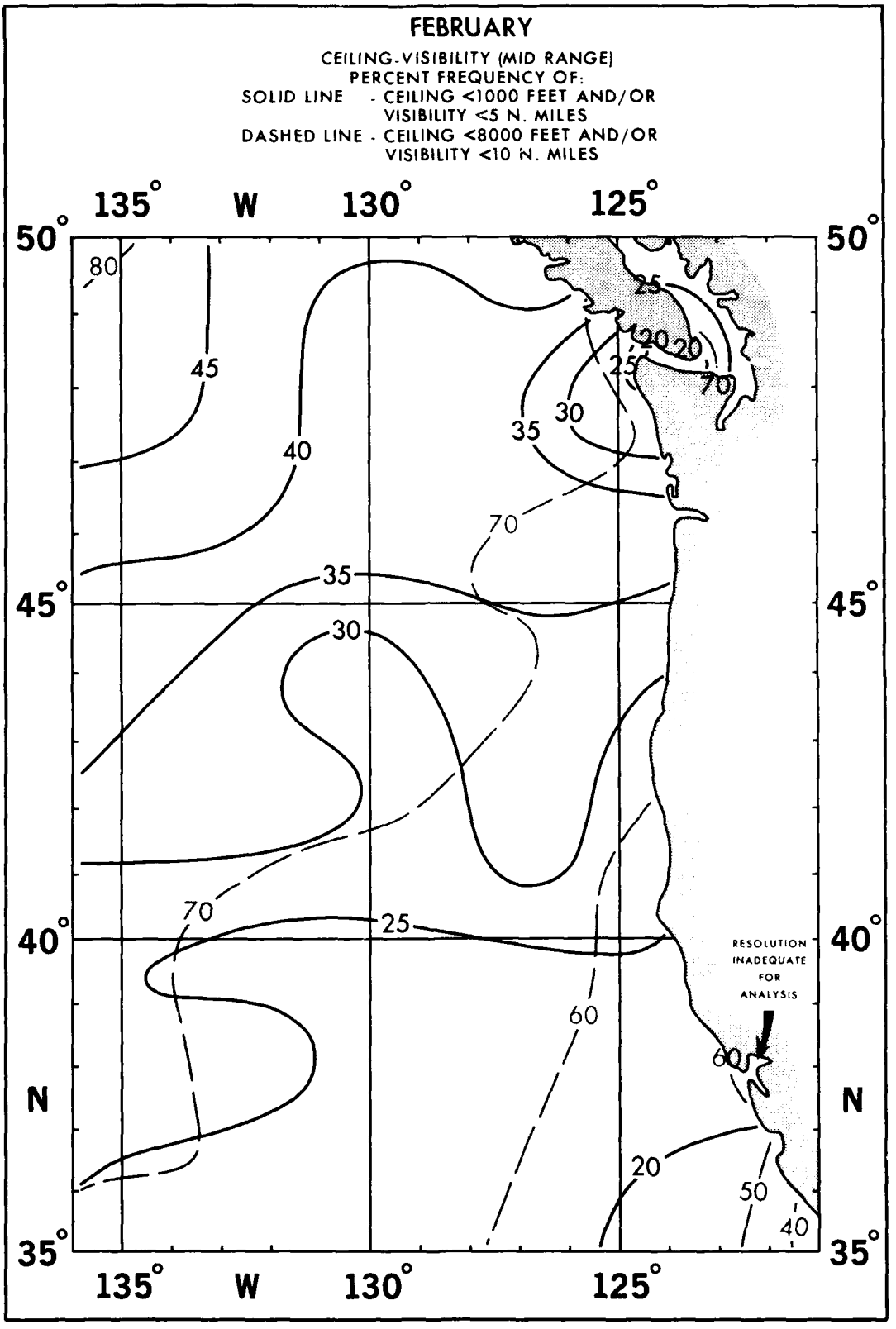

135° W 130° 125°
40°
N
35°
JANUARY
SURFACE CURRENTS

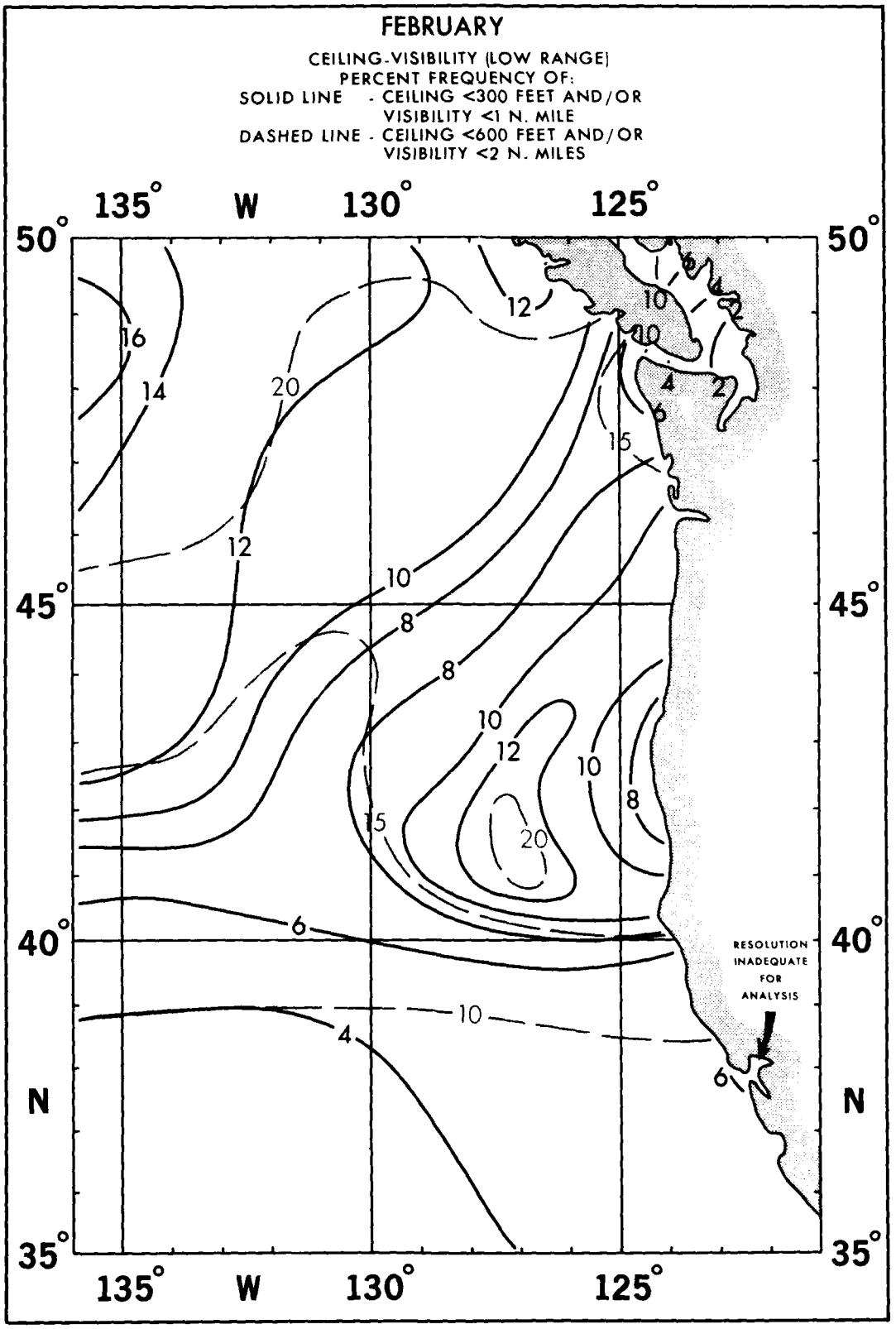

FEBRUARY
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
70
10
10
60
20
10
60
50
20
40
30
40
60
30
50
50
50
RESOLUTION INADEQUATE FOR ANALYSIS

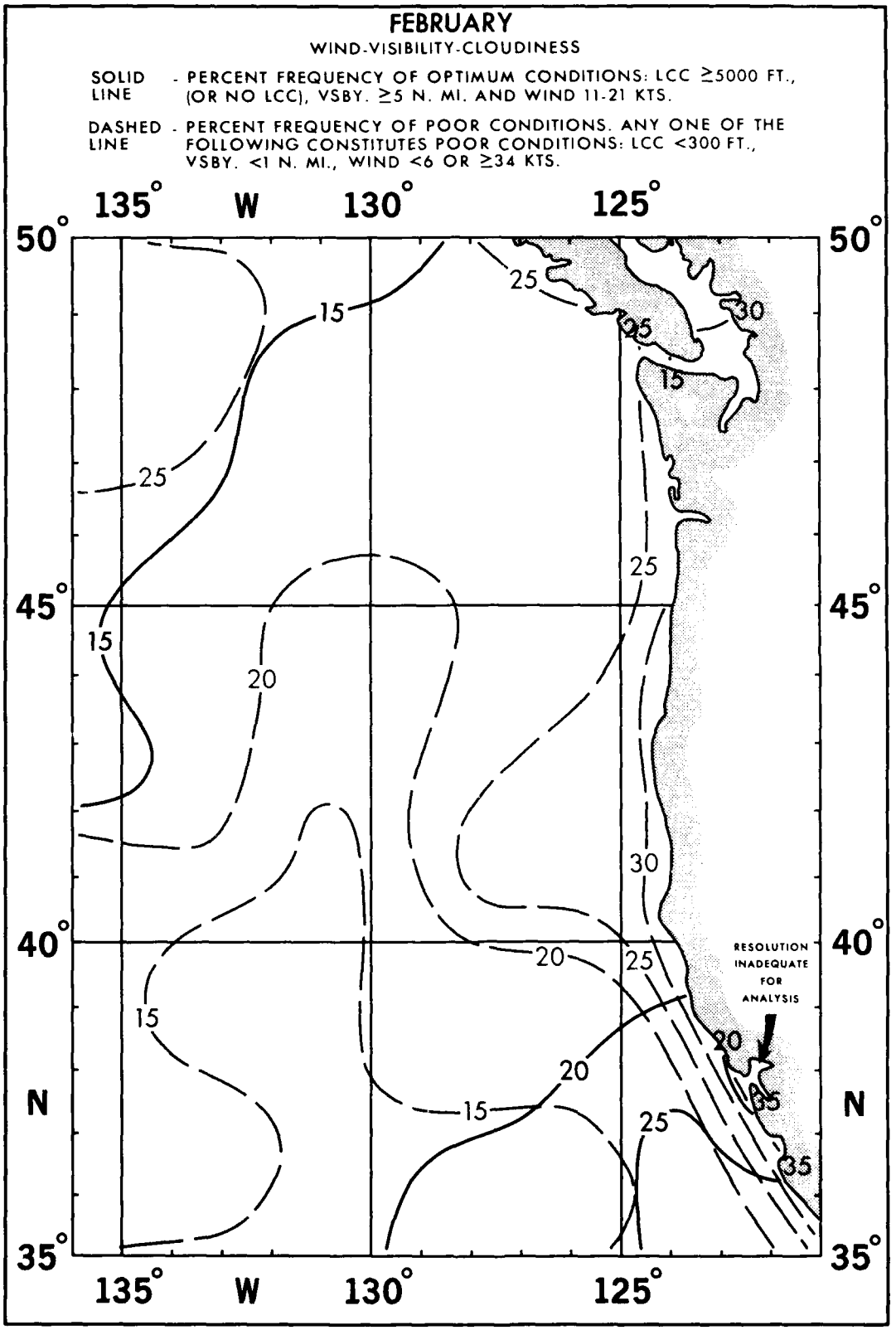

FEBRUARY
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
RESOLUTION INADEQUATE FOR ANALYSIS

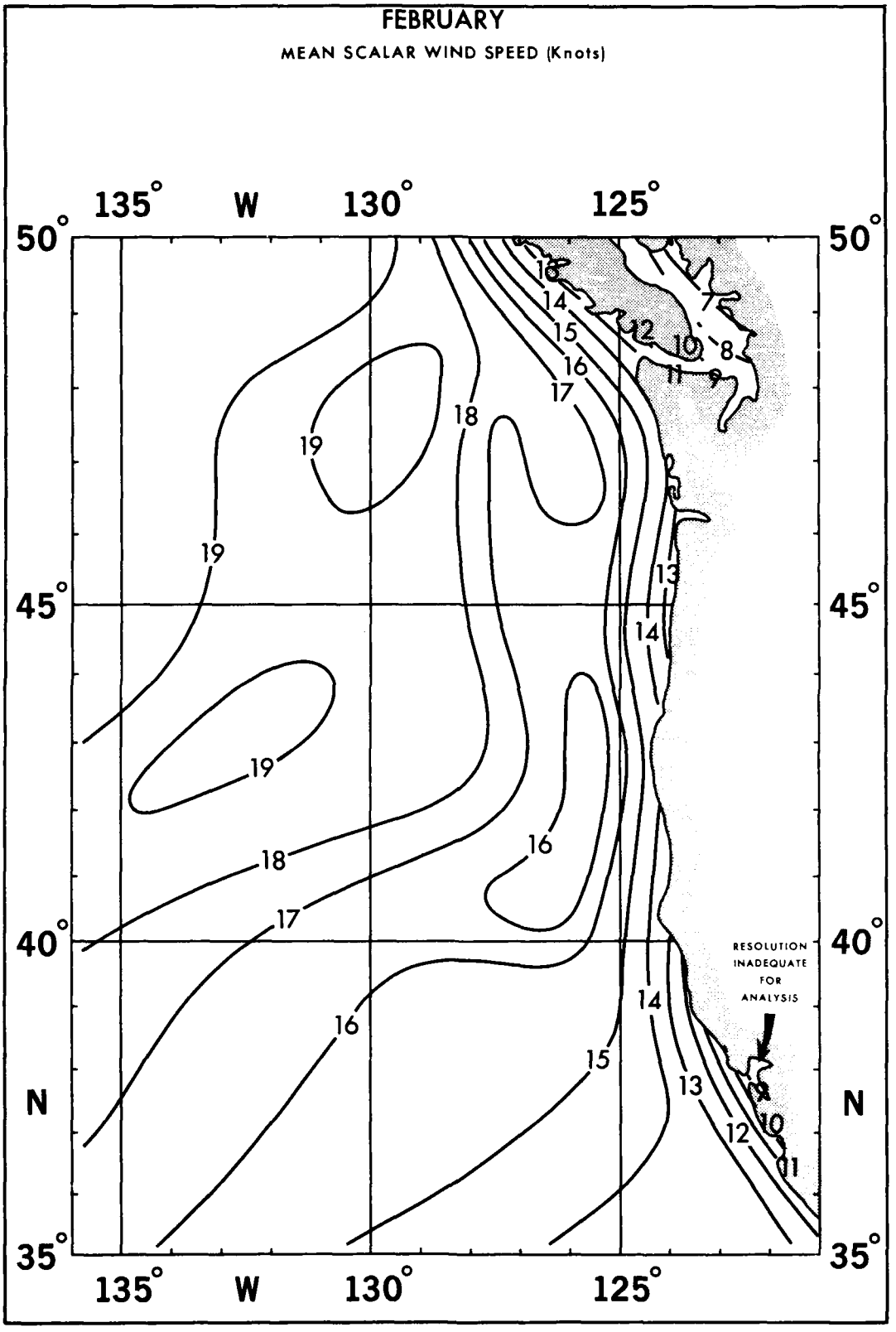

135° W 130° 125°
50°
45°
N
FEBRUARY
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N= OBSERVATION COUNT.

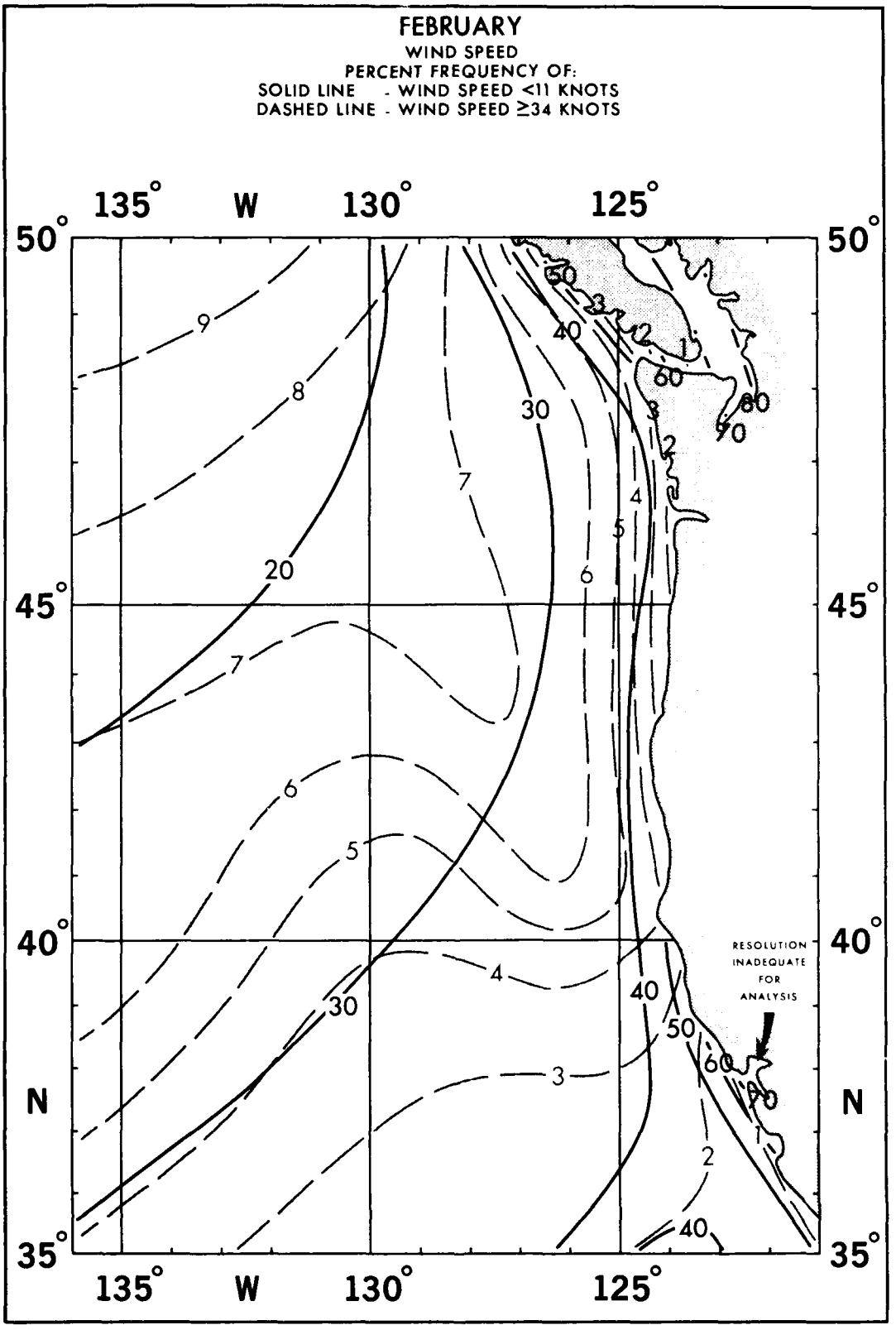

135° W 130° 125°
40°
N
35°
FEBRUARY
VISIBILITY
(NAUTICAL MILES)

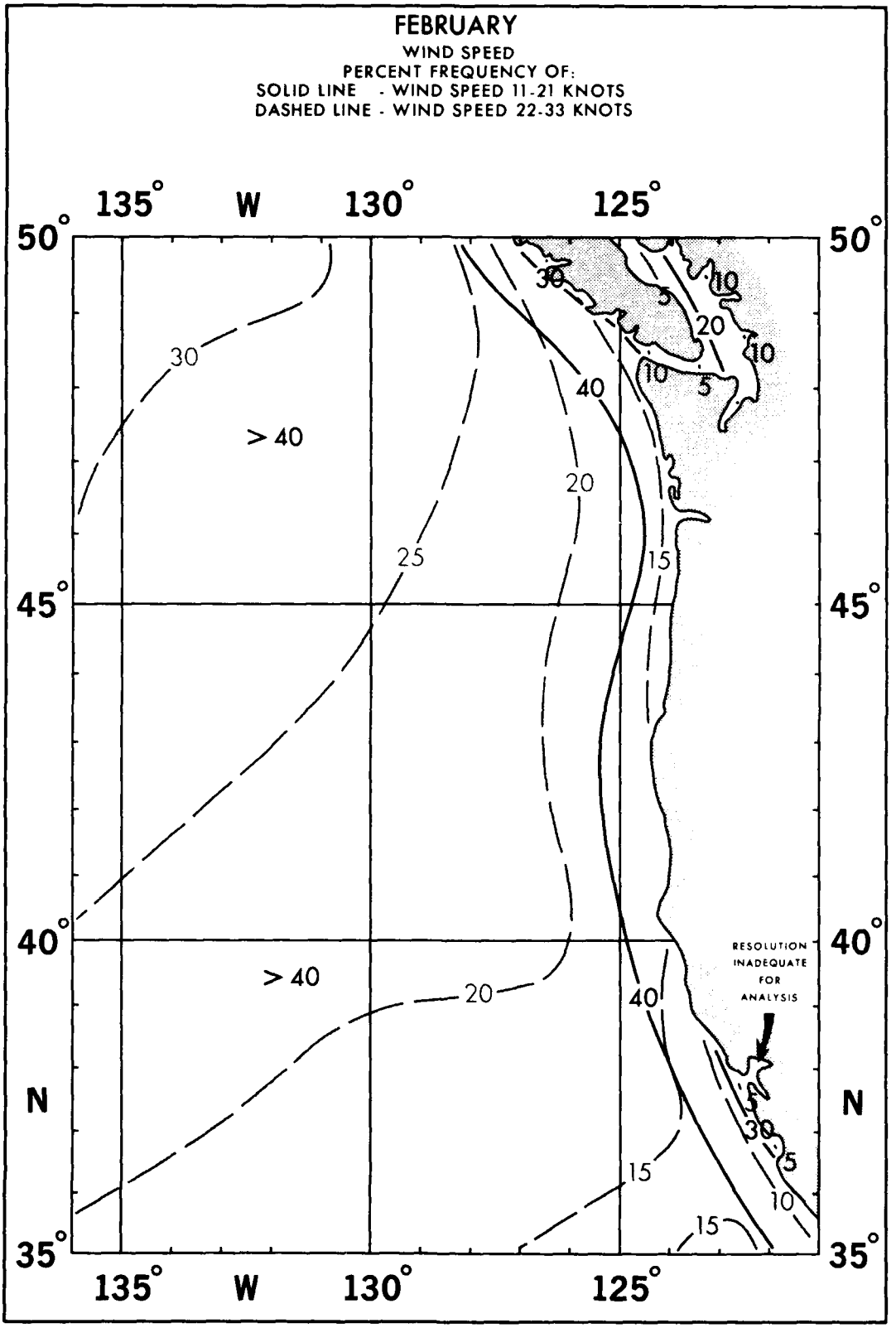

FEBRUARY
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
80
45
40
35
30
25
20
70
60
50
RESOLUTION INADEQUATE FOR ANALYSIS

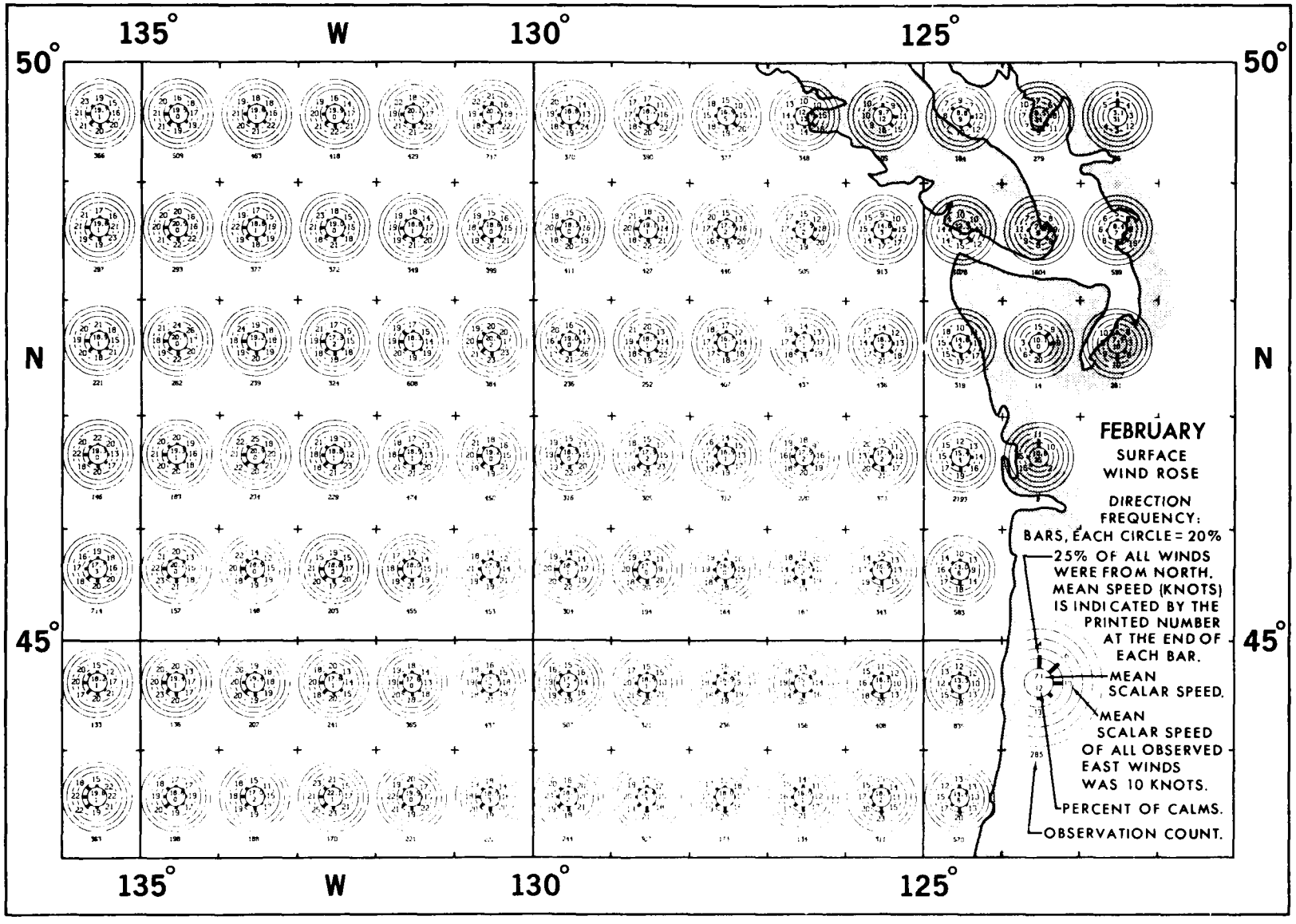

FEBRUARY
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

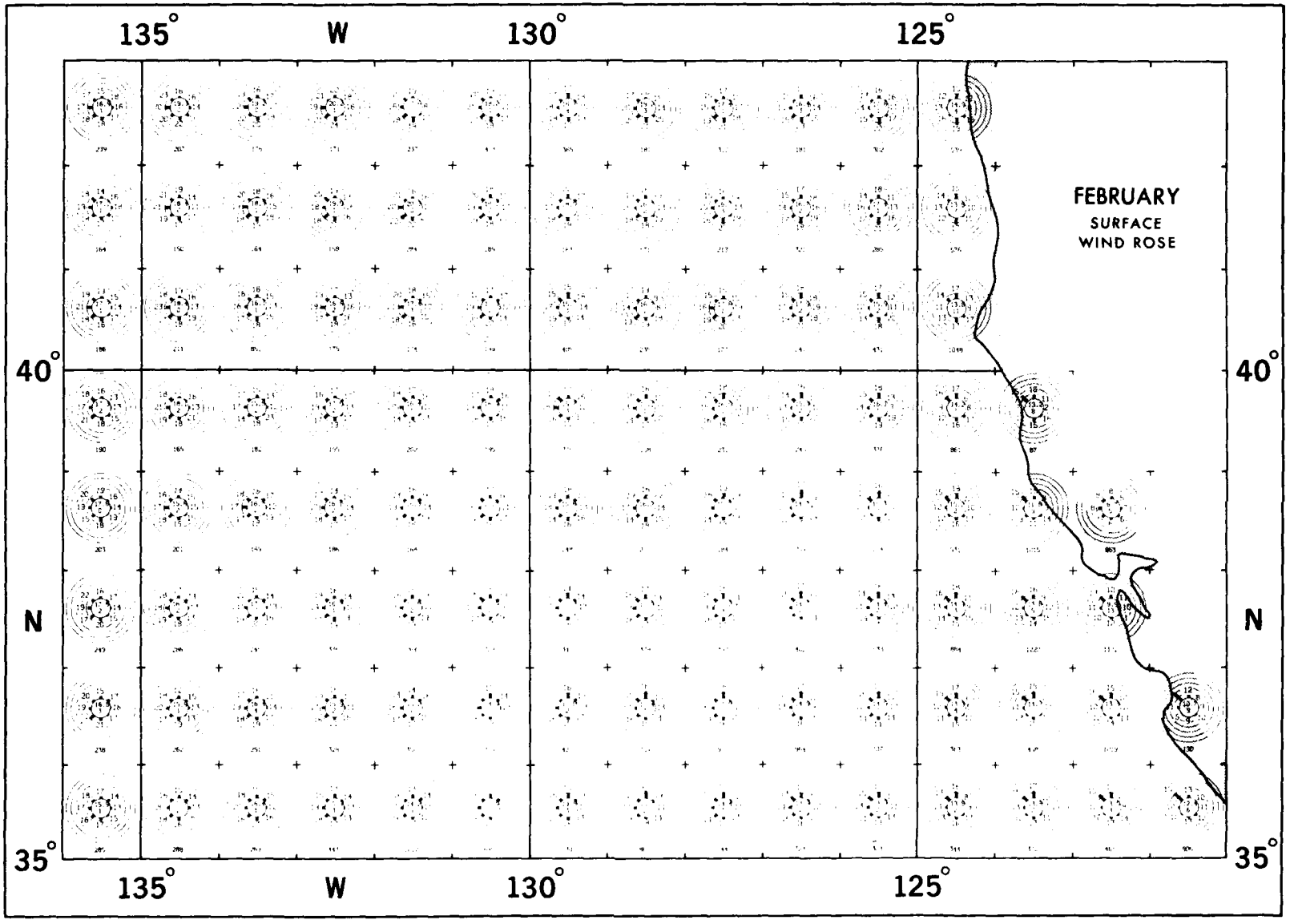

FEBRUARY
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
15
20
25
30
35

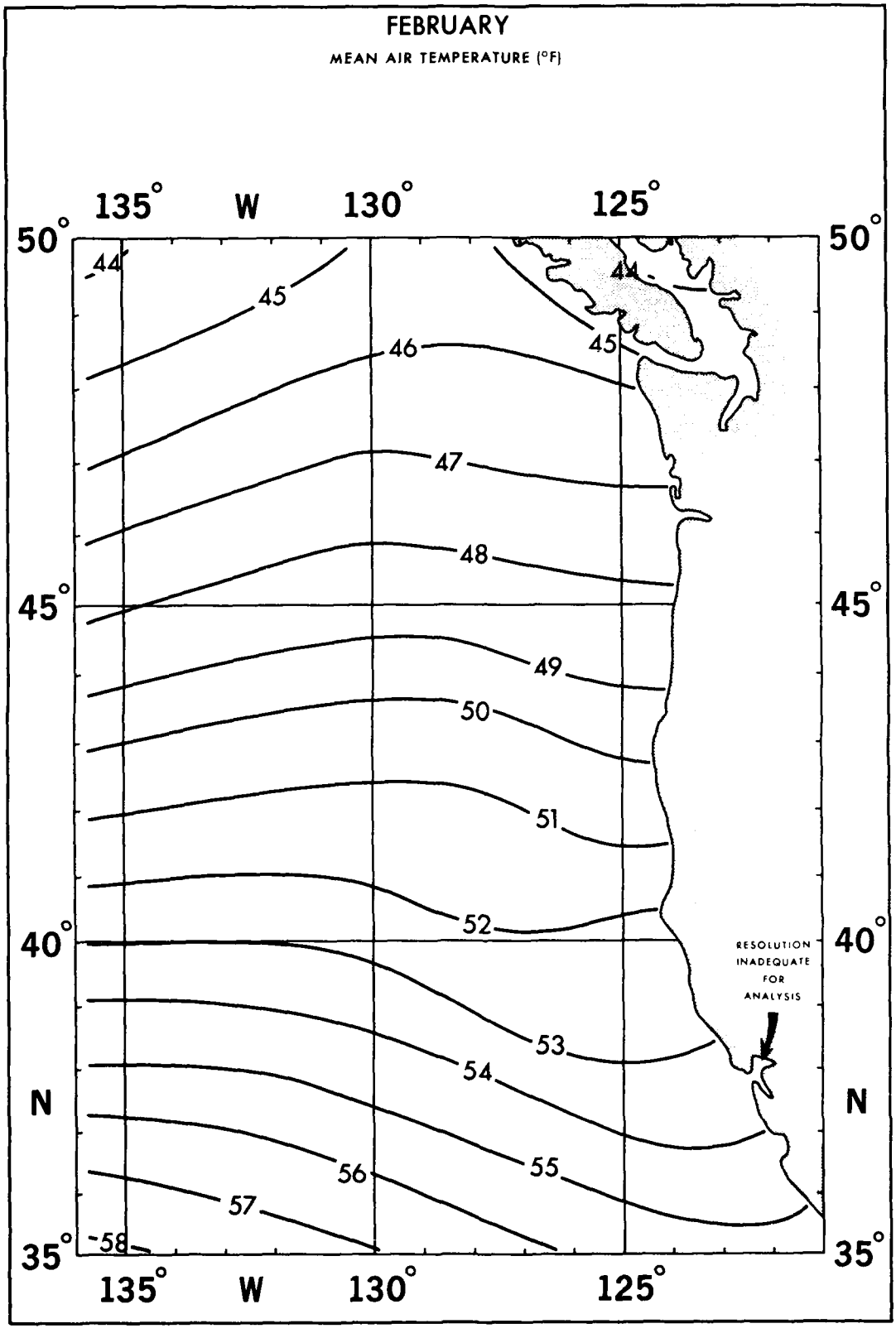

FEBRUARY
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

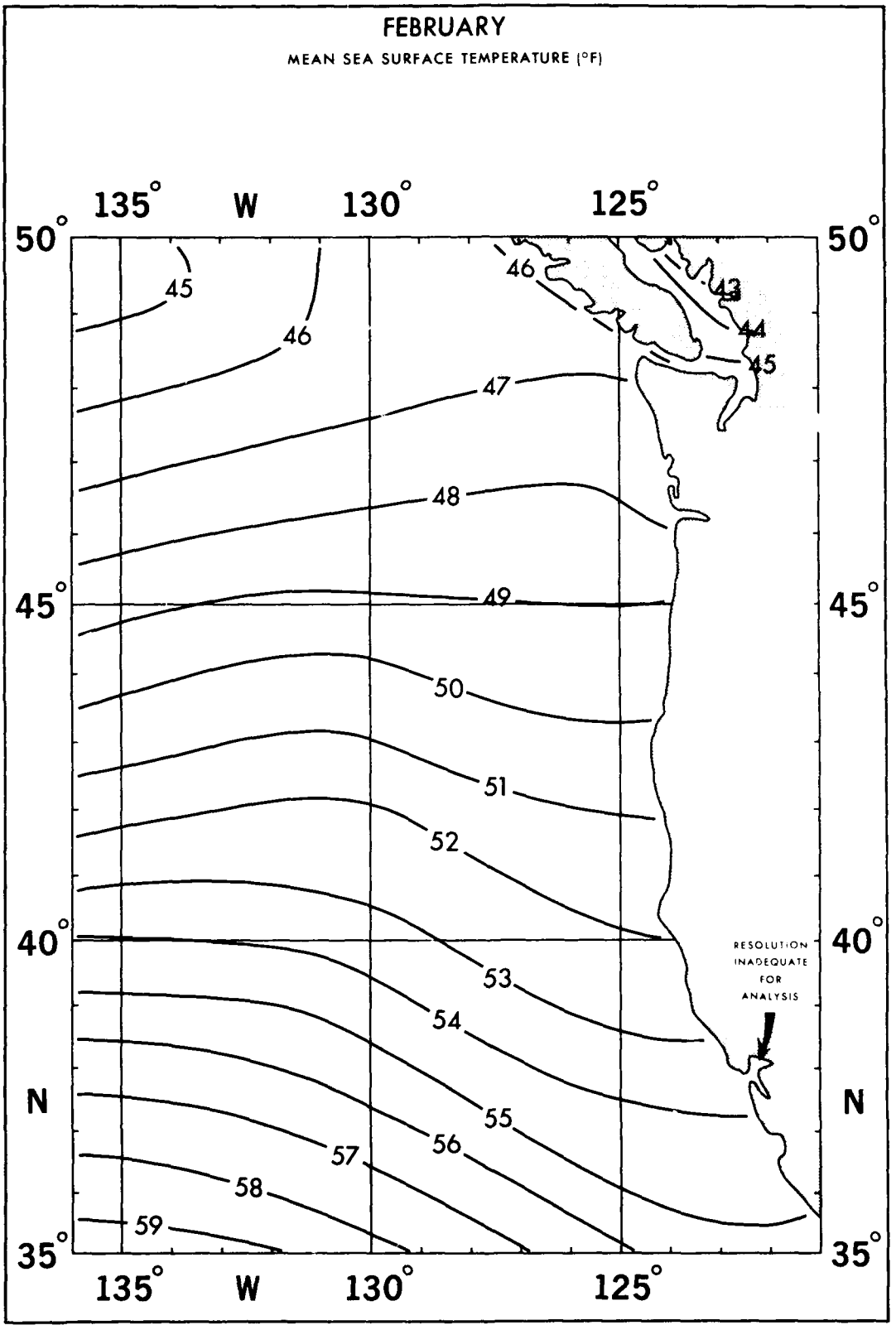

FEBRUARY
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

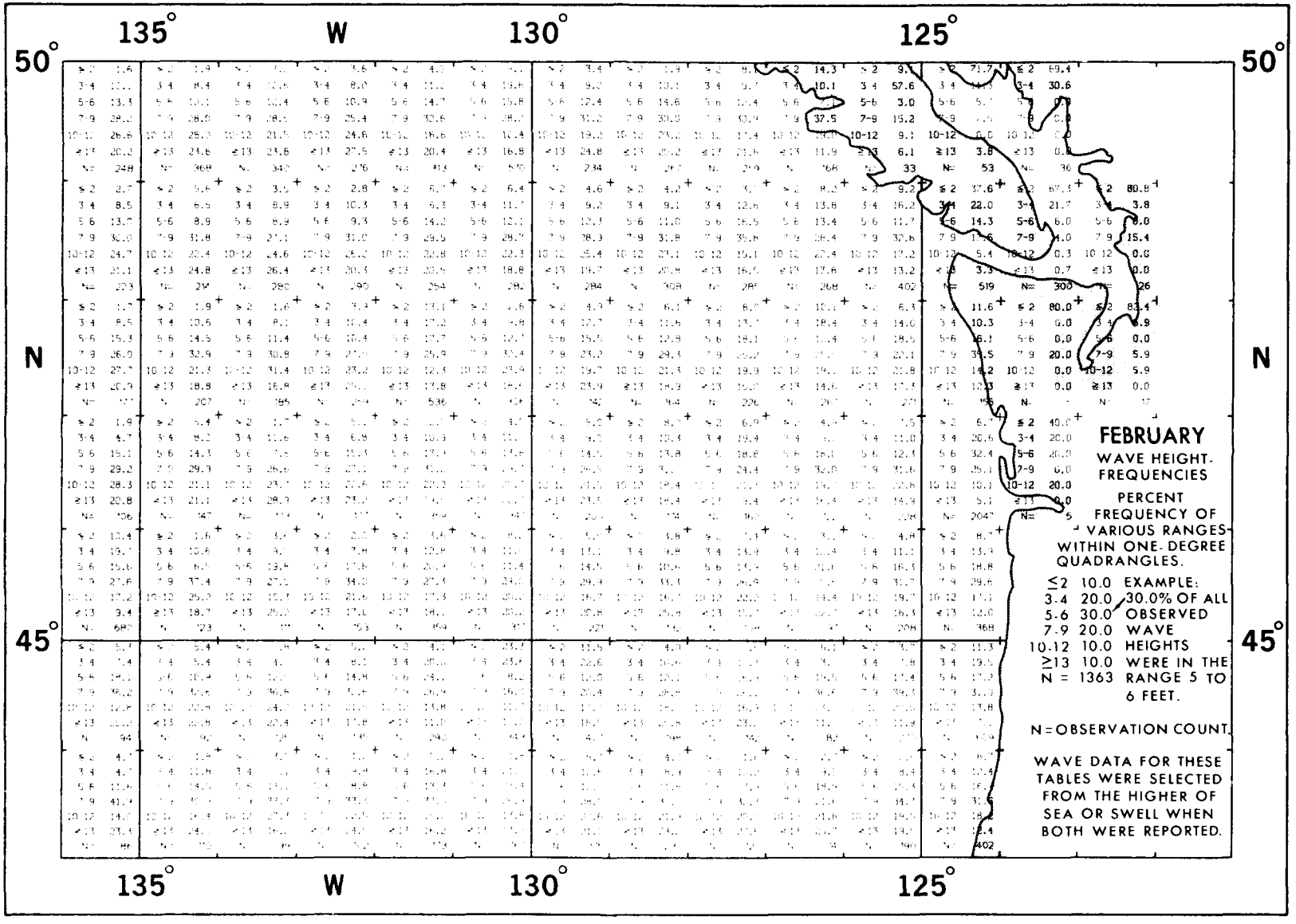

FEBRUARY
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
30
> 40
25
20
15
10
5
40
RESOLUTION INADEQUATE FOR ANALYSIS

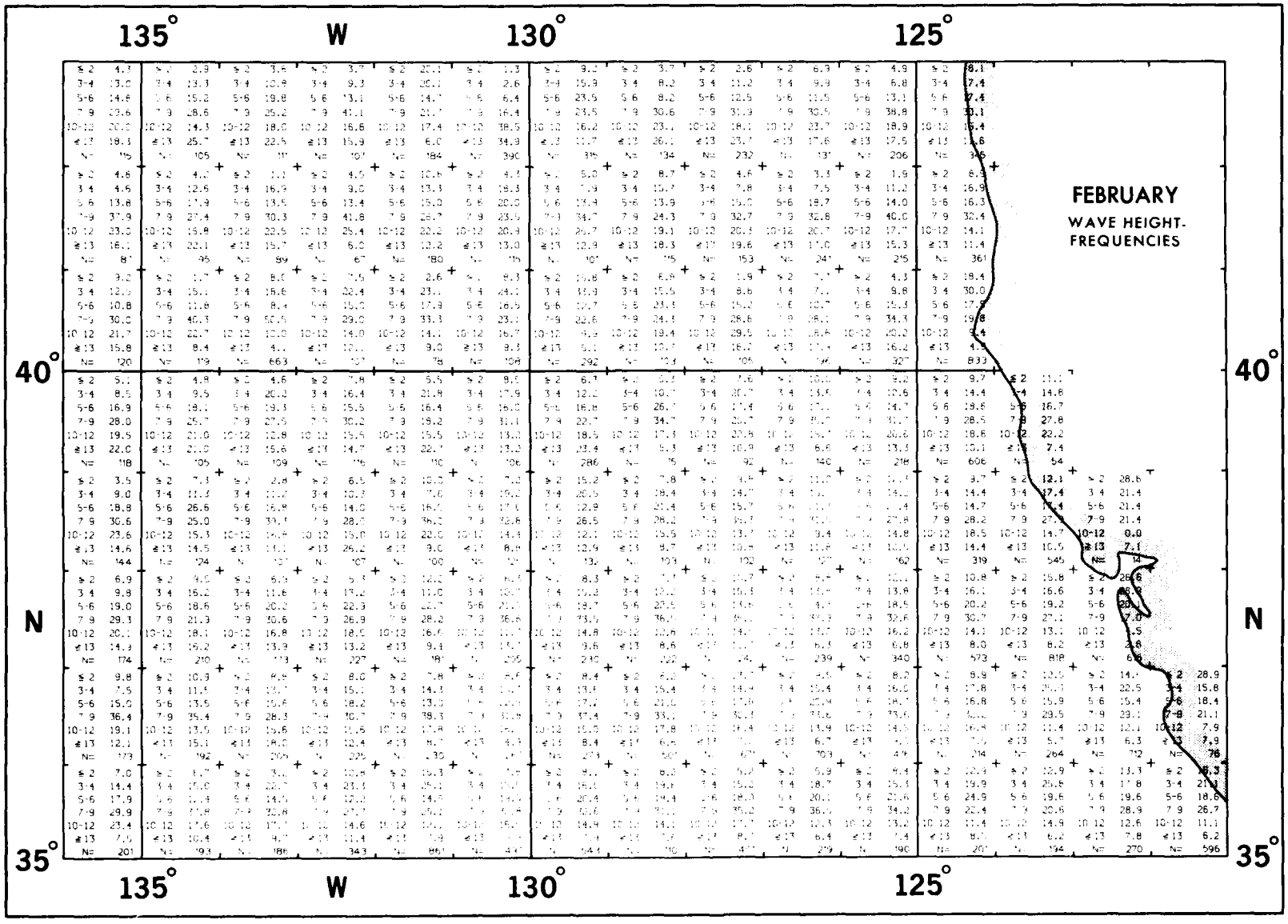

135° W 130° 125°
50°
N
45°
FEBRUARY
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

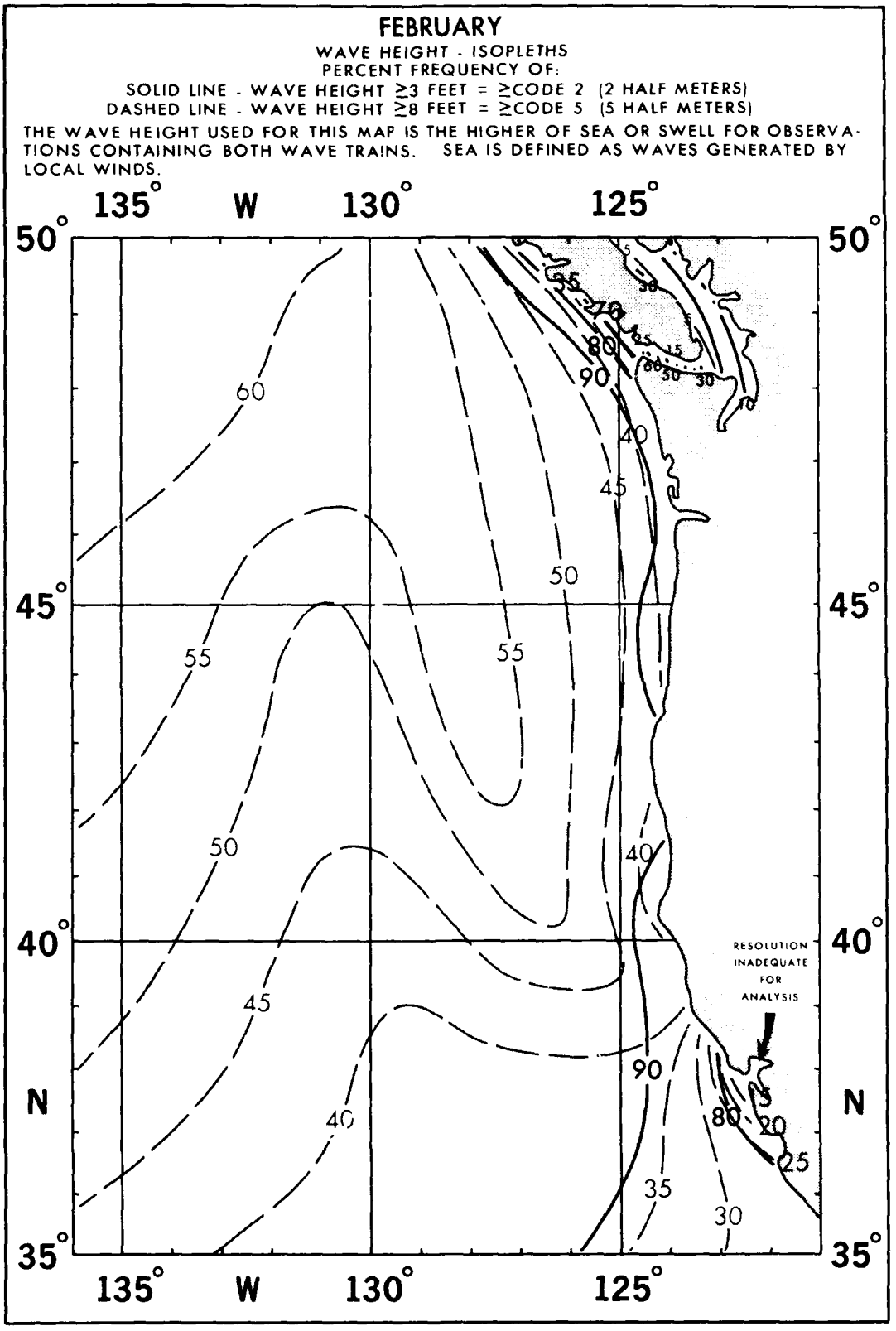

135° W 130° 125°
40° N
35°
FEBRUARY
SURFACE
WIND ROSE

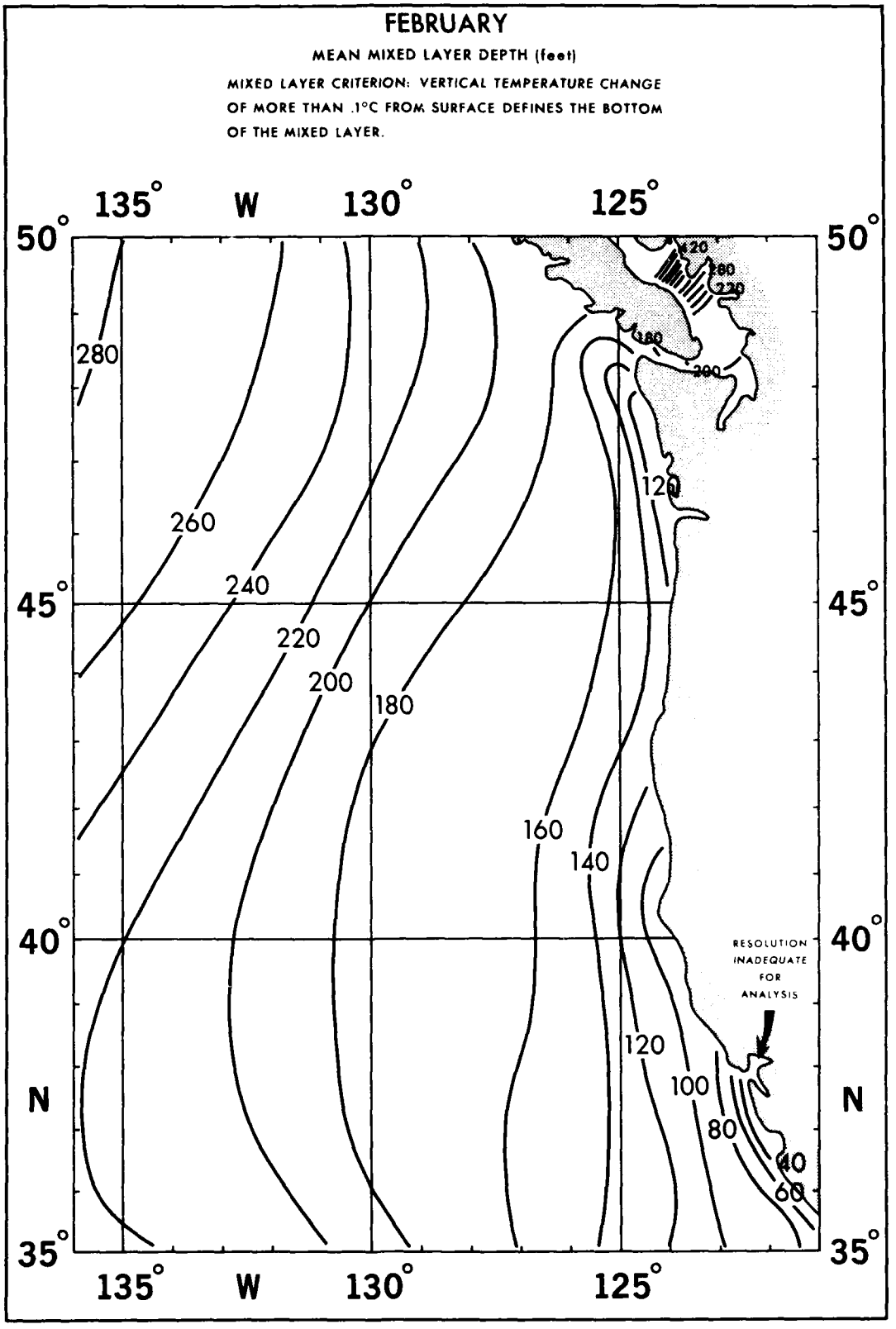

FEBRUARY
MEAN AIR TEMPERATURE (°F)
135° W
130°
125°
50°
45°
40°
35°
N
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
RESOLUTION INADEQUATE FOR ANALYSIS

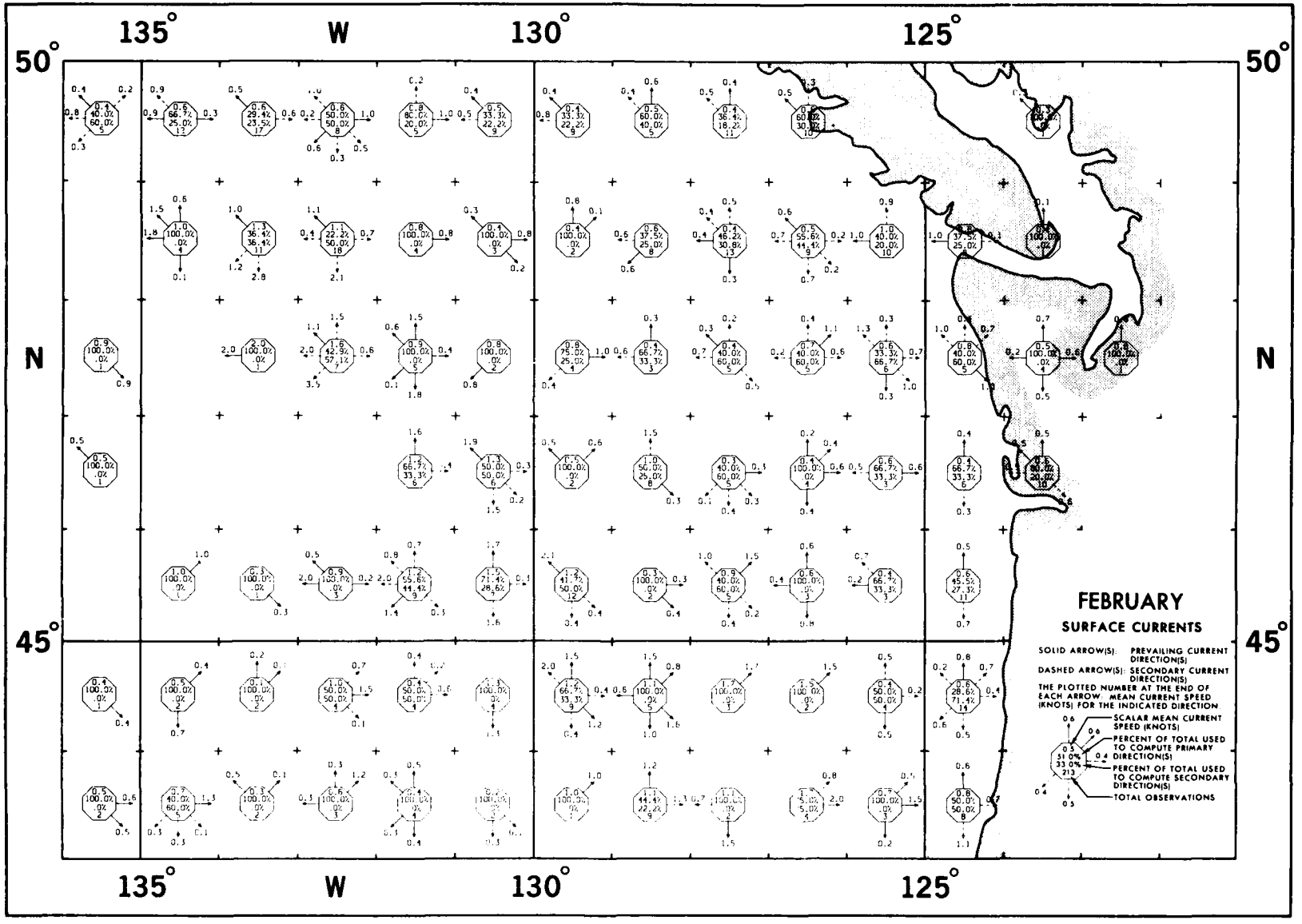

FEBRUARY
MEAN SEA SURFACE TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
46
43
44
45
RESOLUTION INADEQUATE FOR ANALYSIS

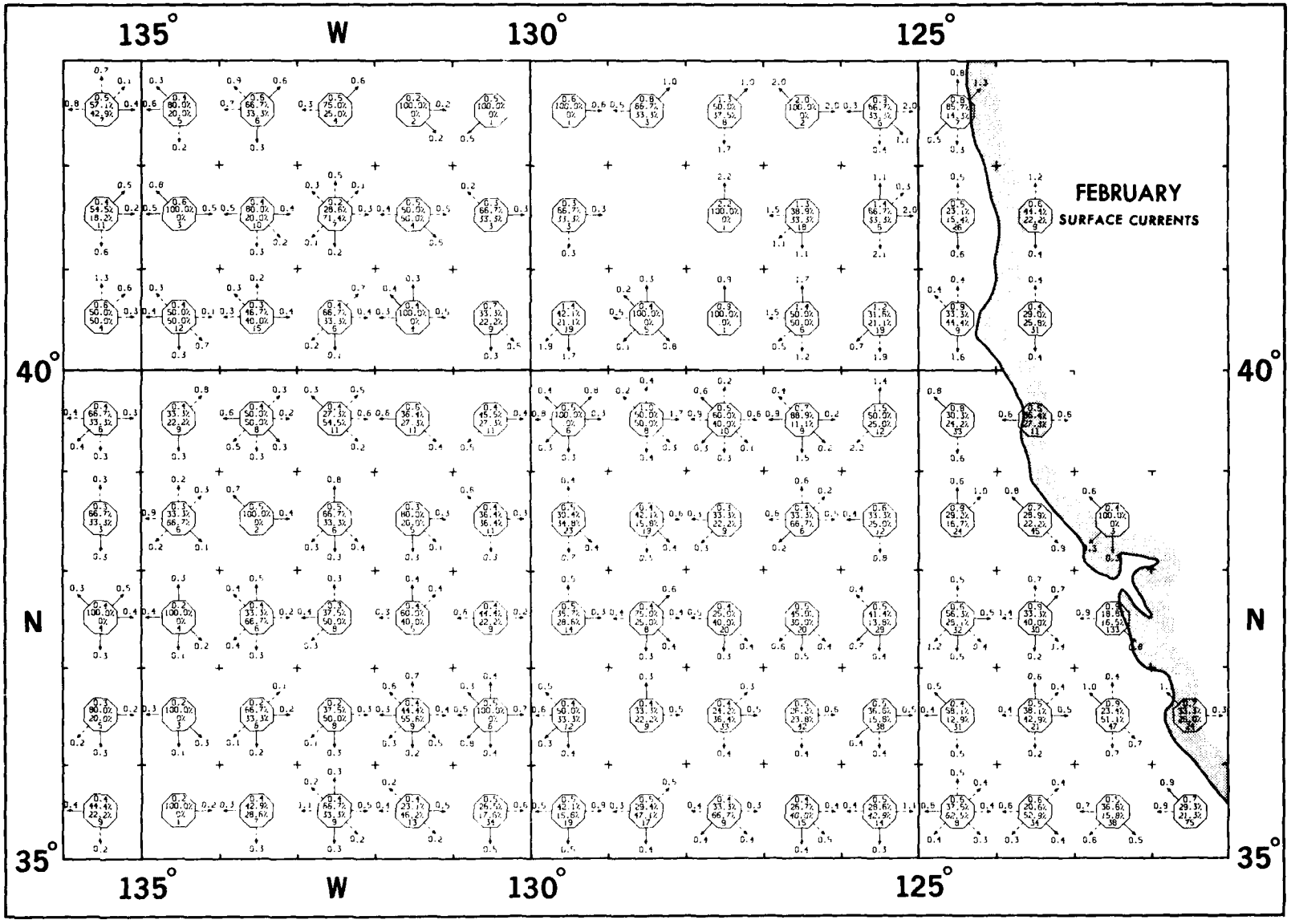

135° W 130° 125°
50°
45°
N
FEBRUARY
WAVE HEIGHT. FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

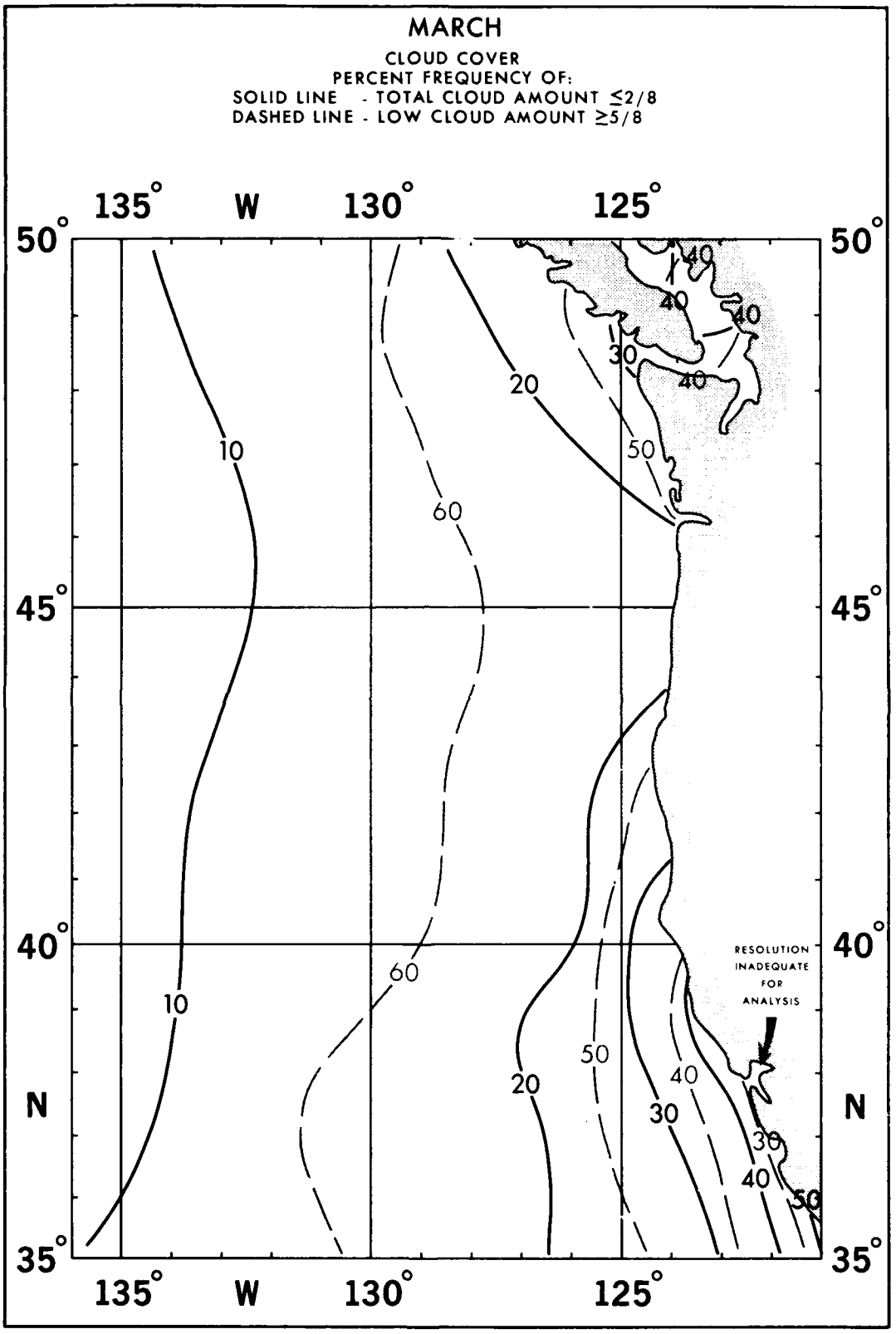

135° W 130° 125°
40°
N
35°
FEBRUARY
WAVE HEIGHT-
FREQUENCIES

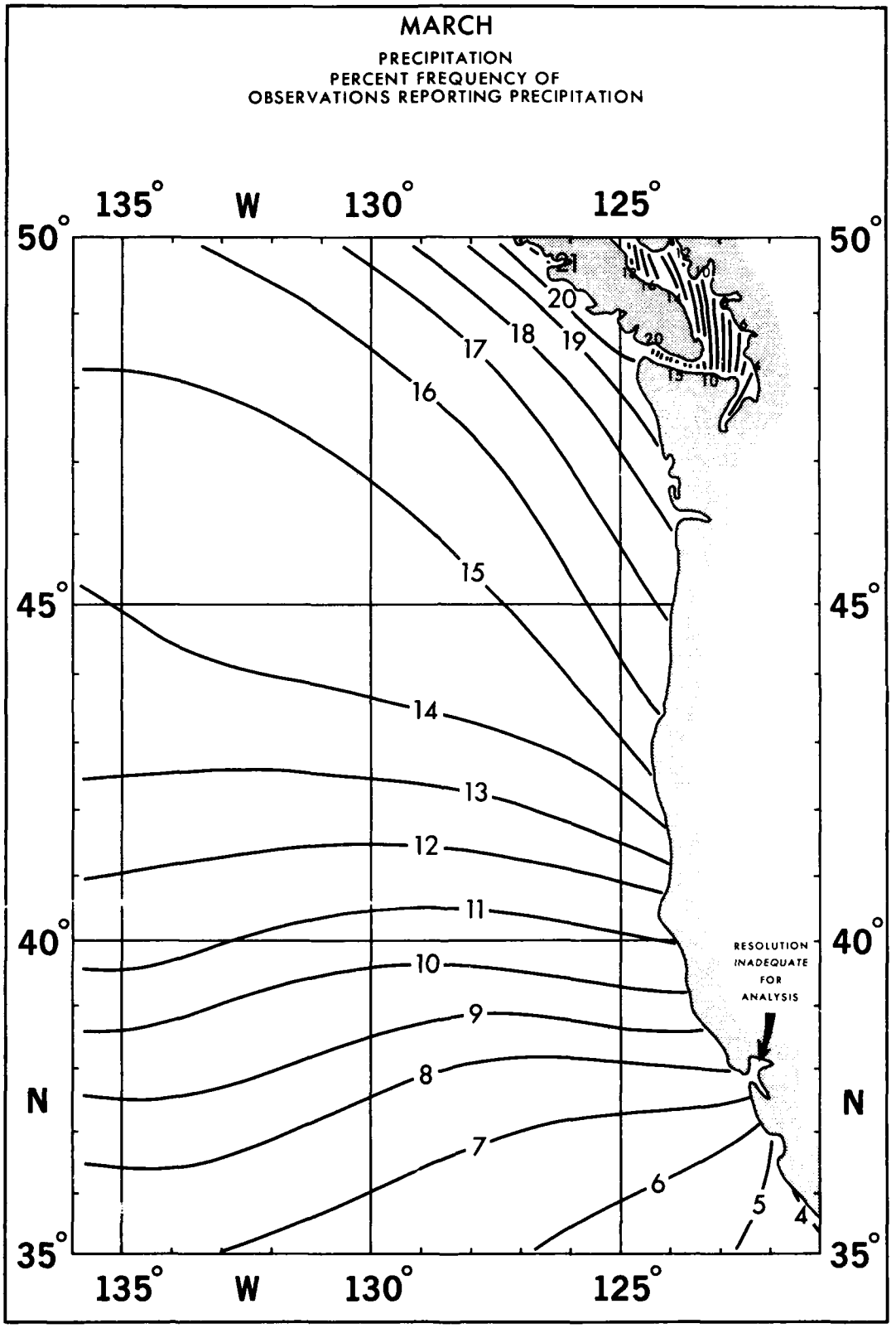

FEBRUARY
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
60
55
50
45
40
90
80
70
65
35
30
25
20
15
5

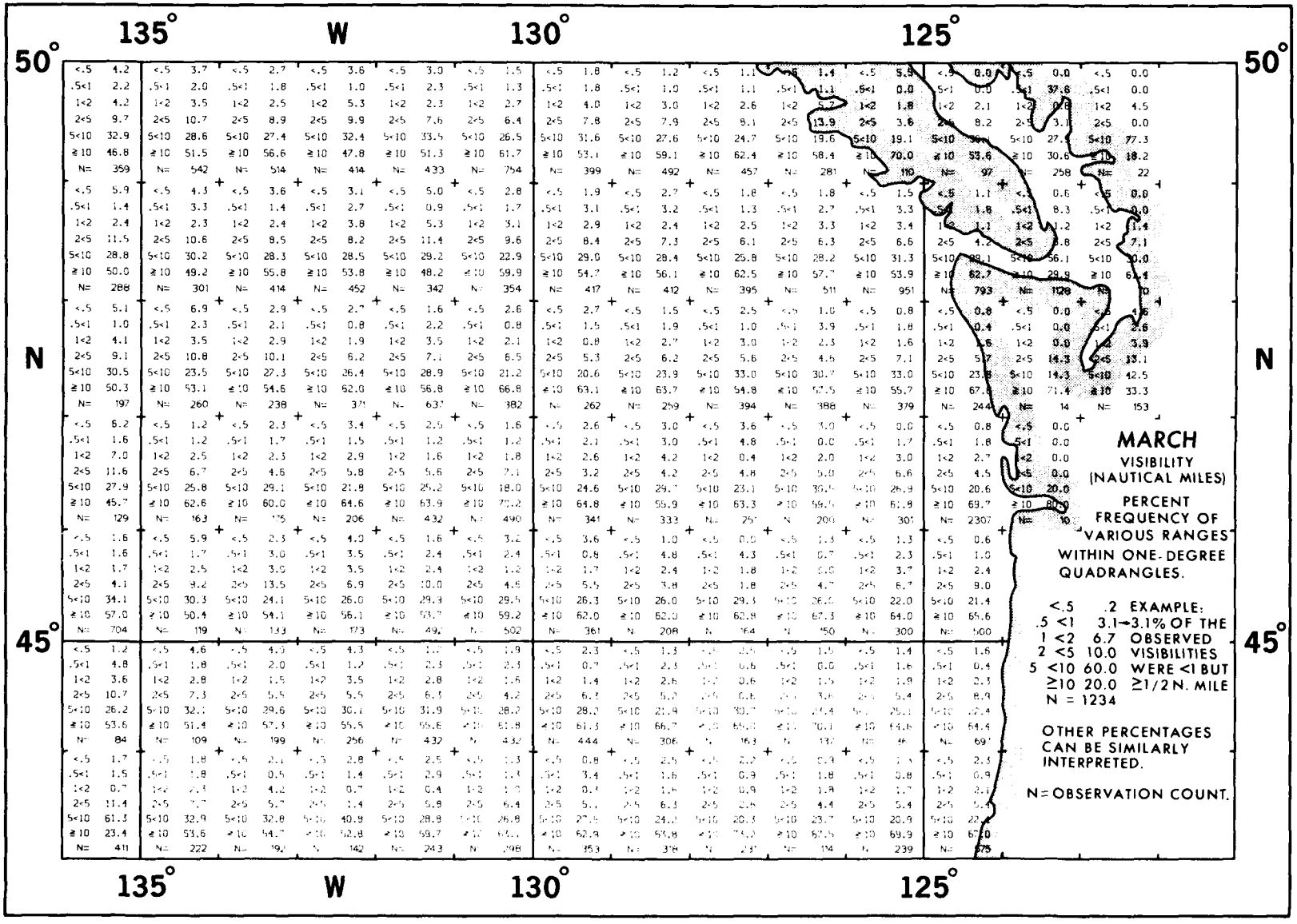

FEBRUARY
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W 130° 125°
50°
45°
40°
35°
N
280
260
240
220
200
180
160
140
120
100
80
60
40
220
200
180
120
RESOLUTION INADEQUATE FOR ANALYSIS

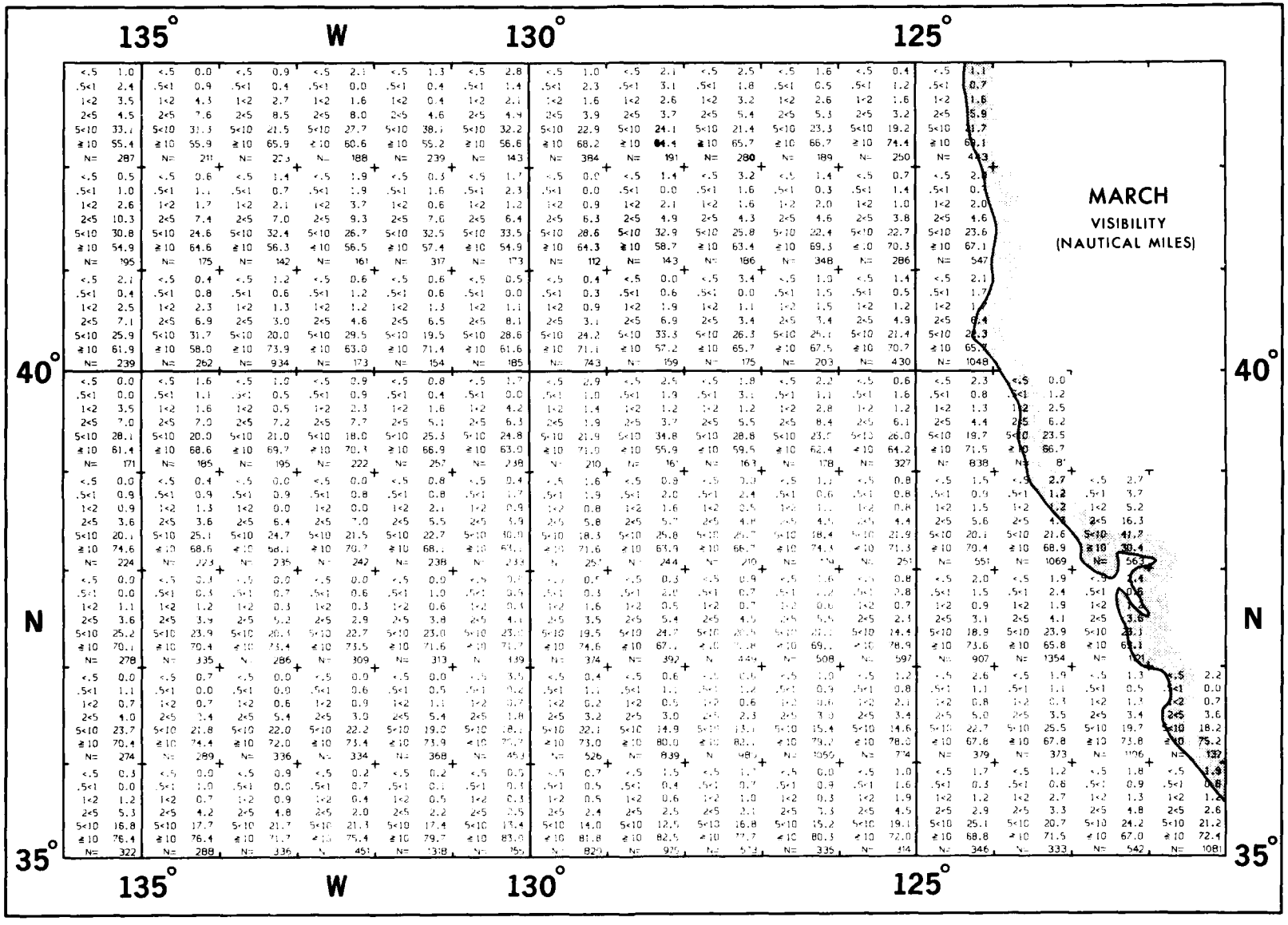

135° W 130° 125°
50°
45°
N
FEBRUARY
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW: MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

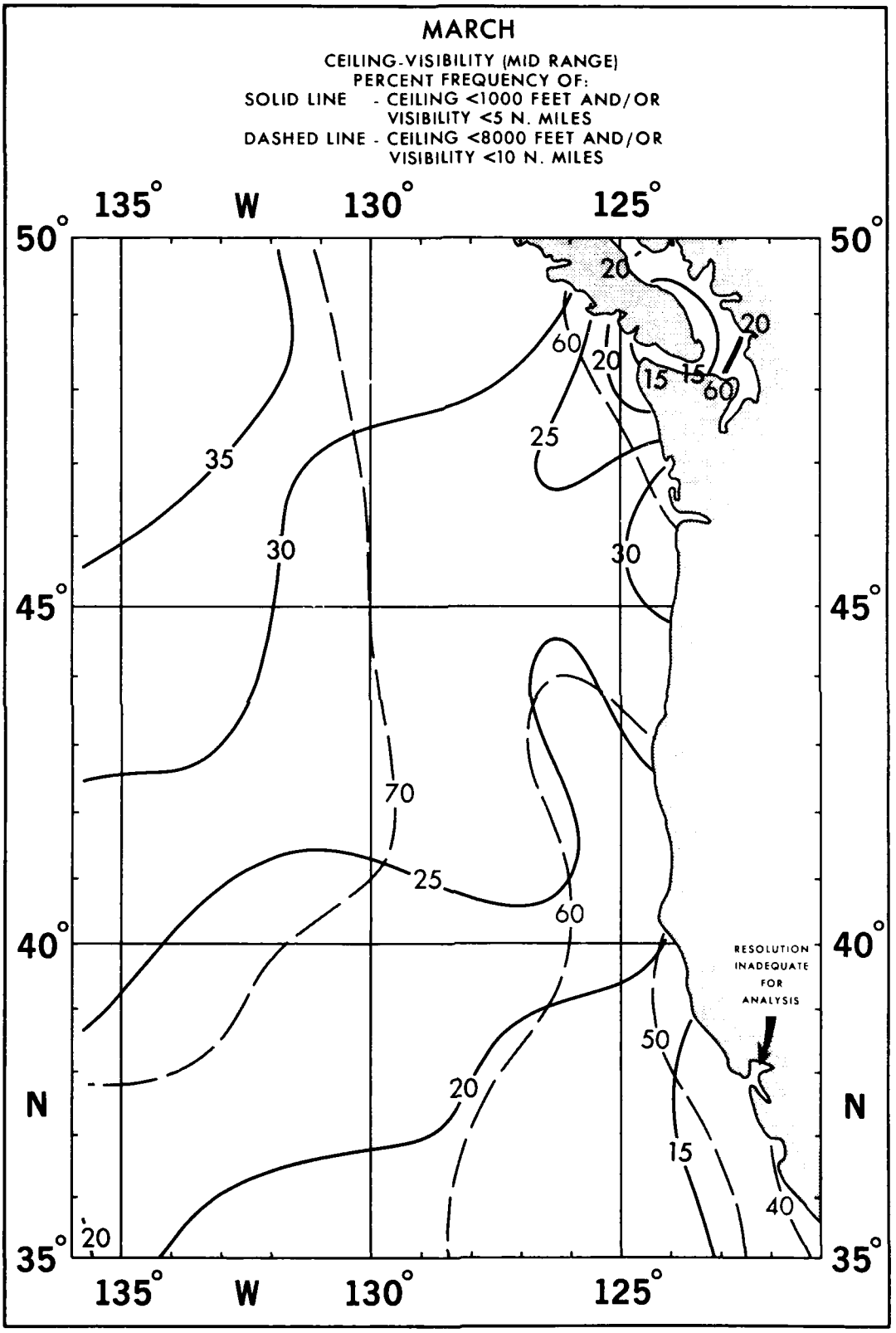

135° W 130° 125°
40°
N
35°
FEBRUARY
SURFACE CURRENTS

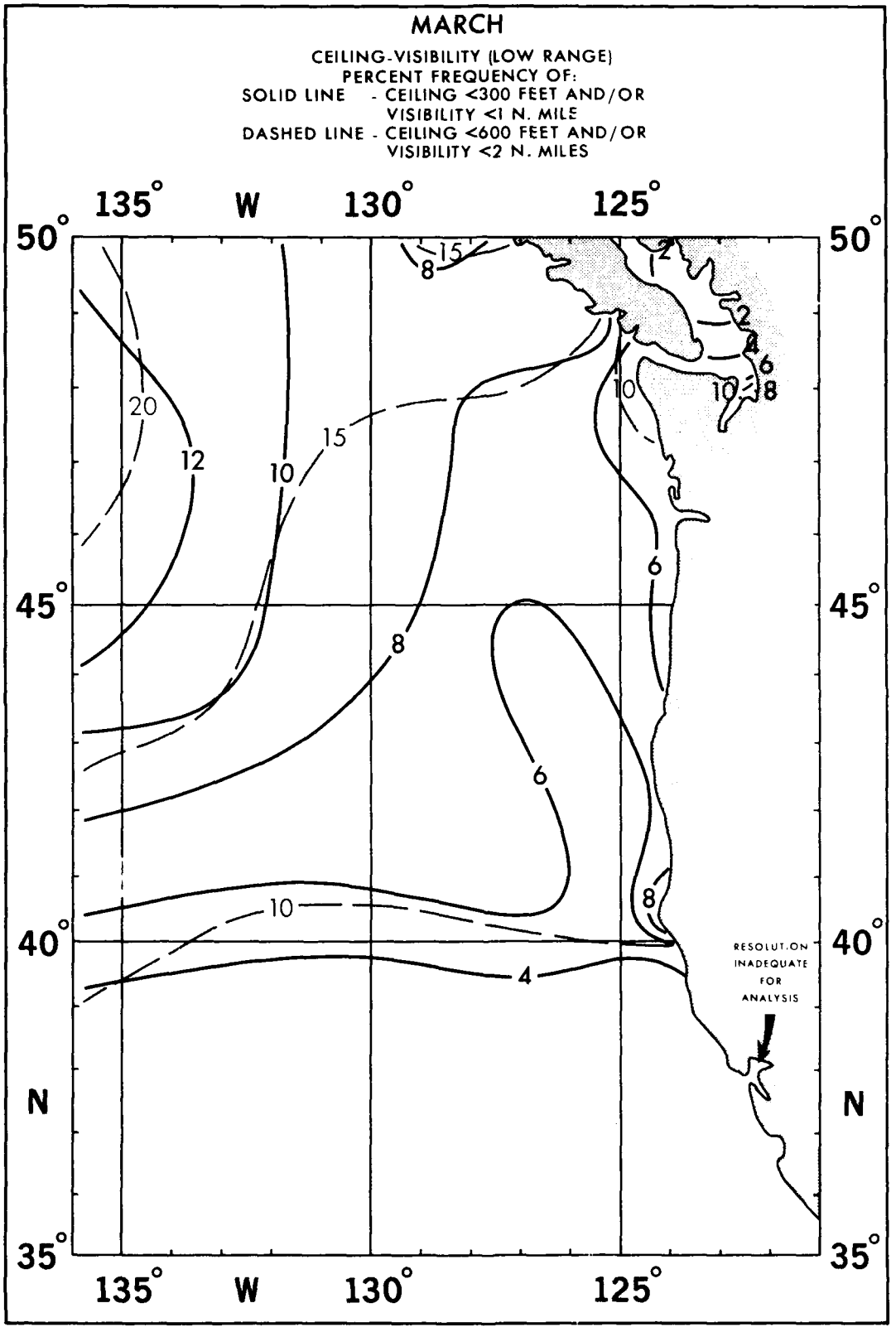

MARCH
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W
130°
125°
50°
45°
40°
35°
N
10
20
30
40
50
60
RESOLUTION INADEQUATE FOR ANALYSIS

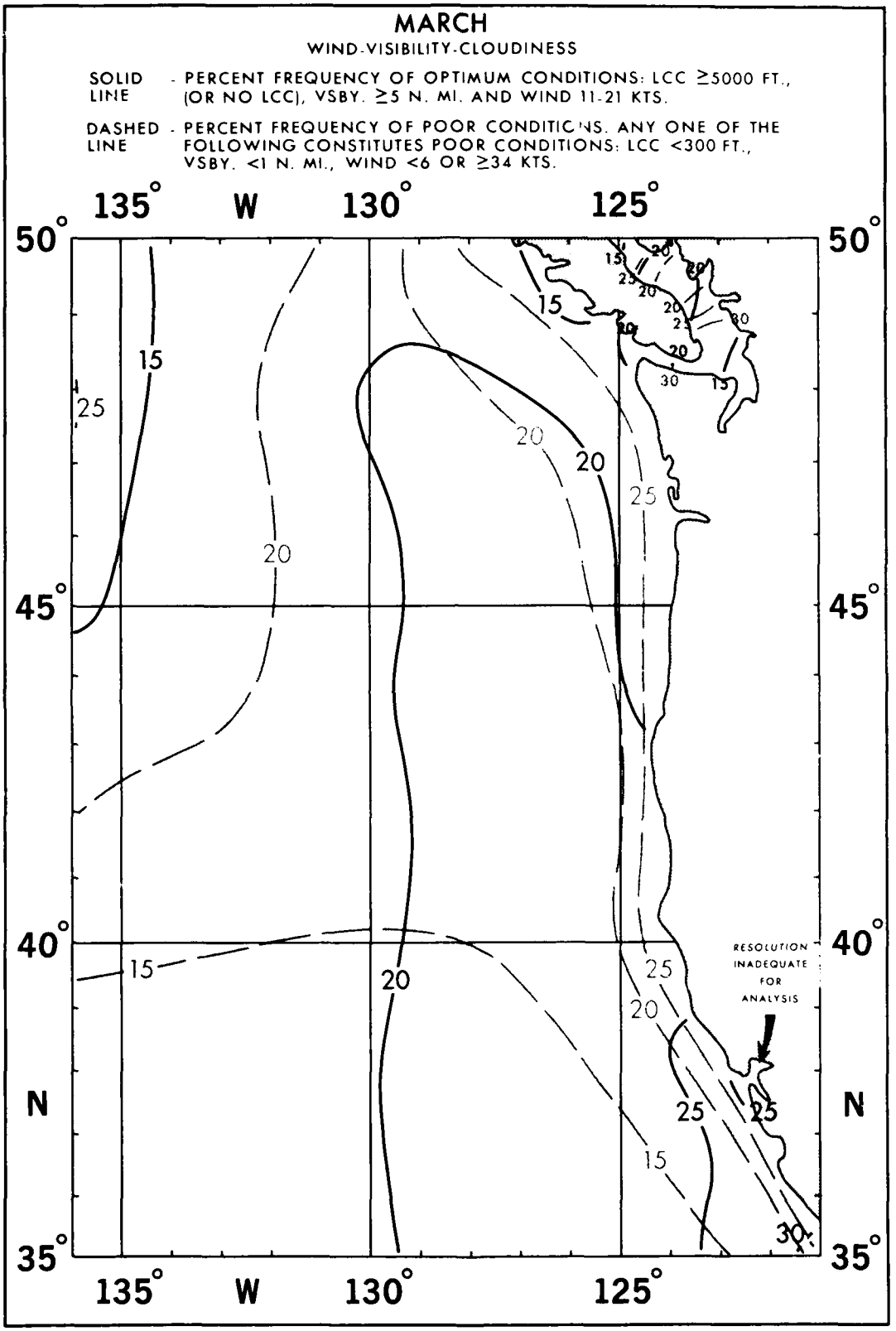

MARCH
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
RESOLUTION INADEQUATE FOR ANALYSIS

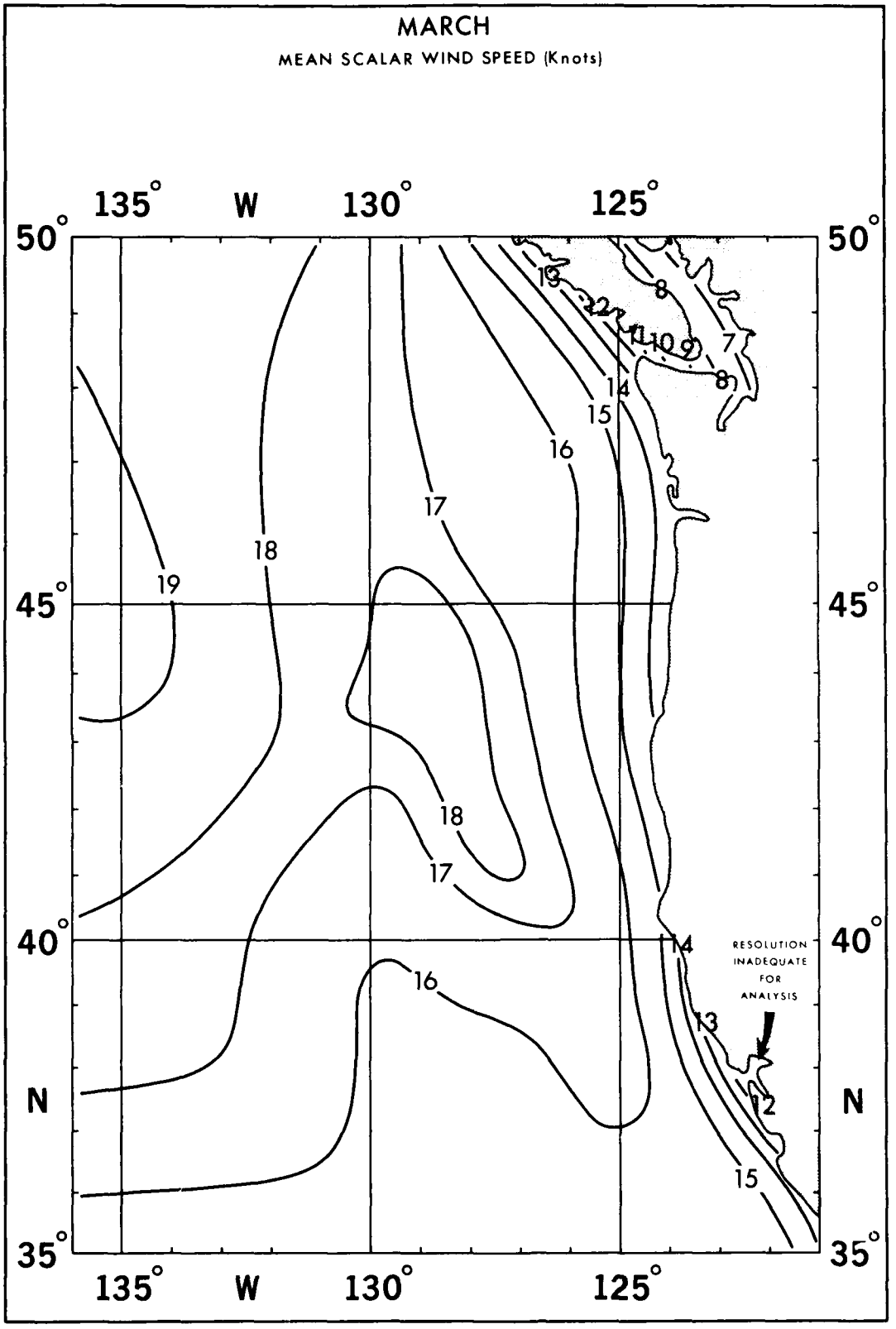

135° W 130° 125°
50°
45°
N
MARCH
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N= OBSERVATION COUNT.

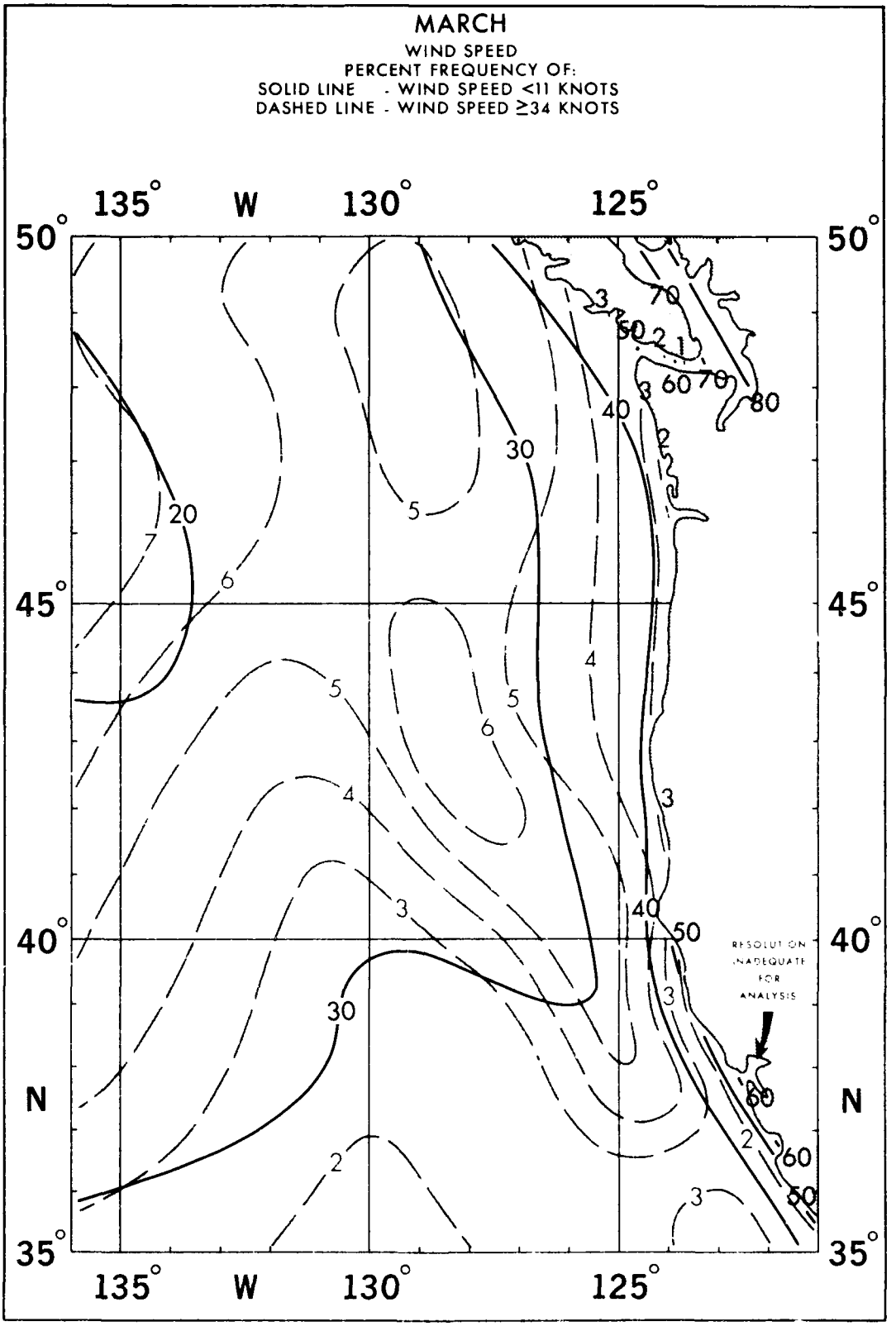

135° W 130° 125°
40°
N
35°
MARCH
VISIBILITY
(NAUTICAL MILES)

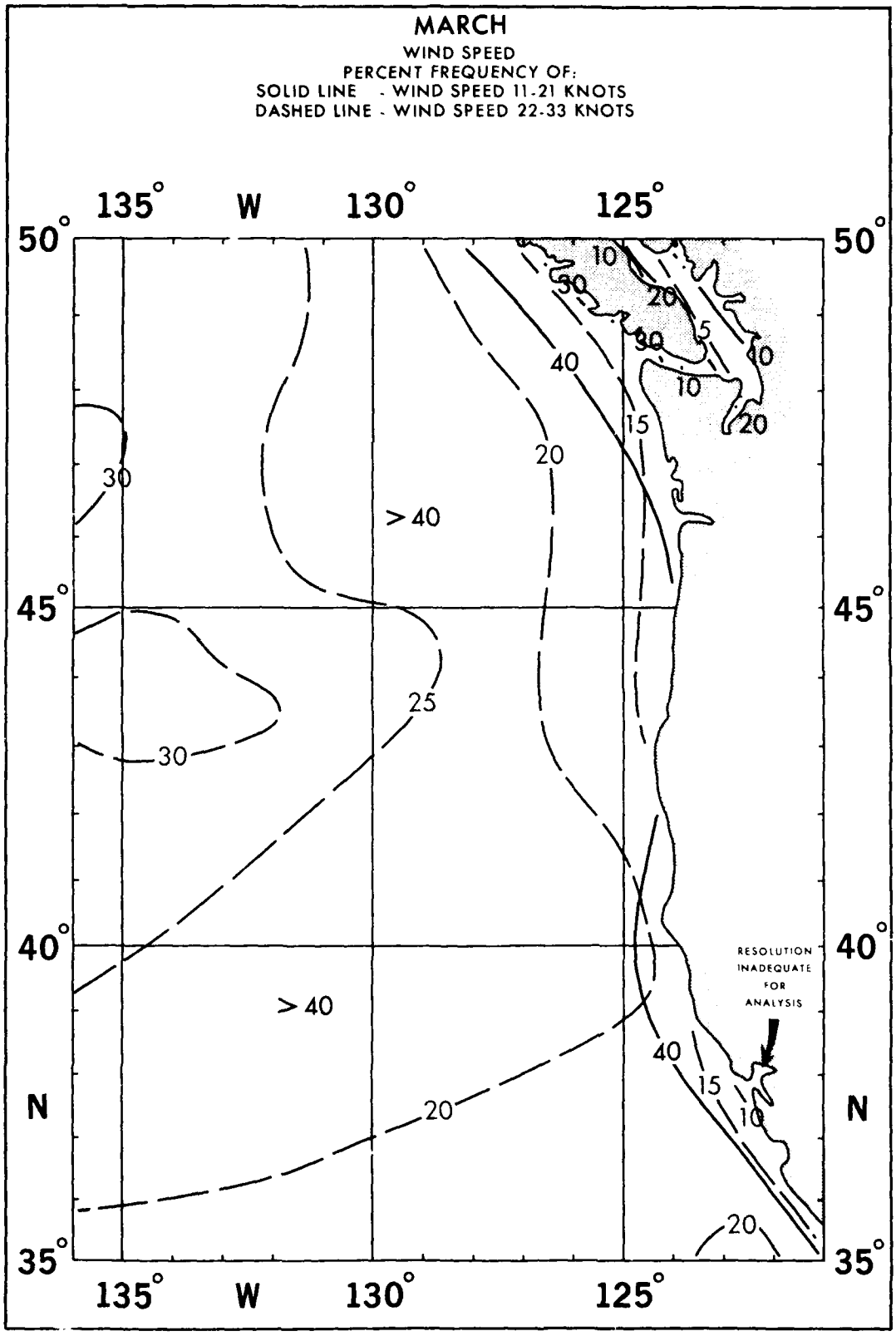

MARCH
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
20
60
20
15
15
60
20
25
35
30
30
70
25
60
50
20
15
40
20

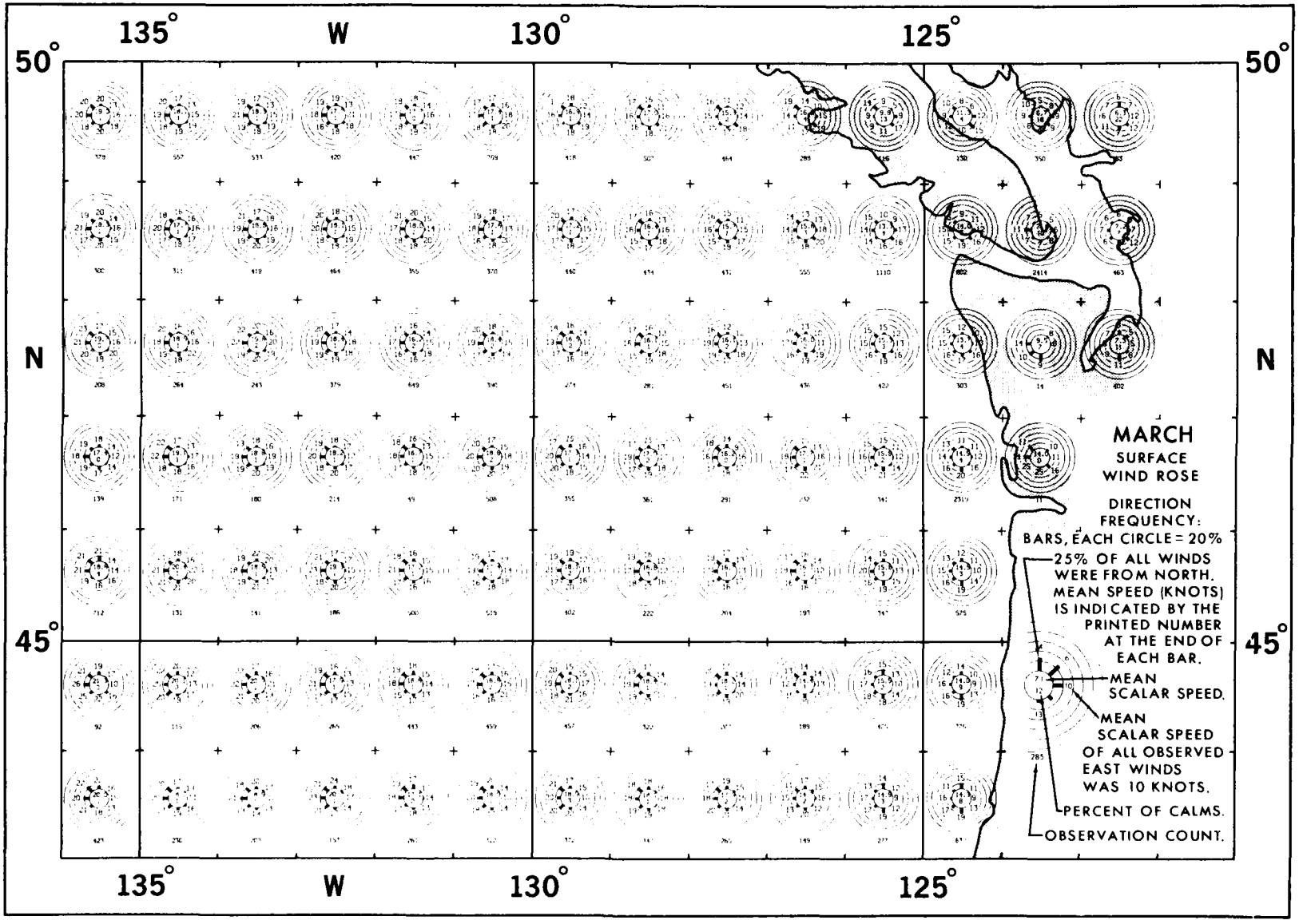

MARCH
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

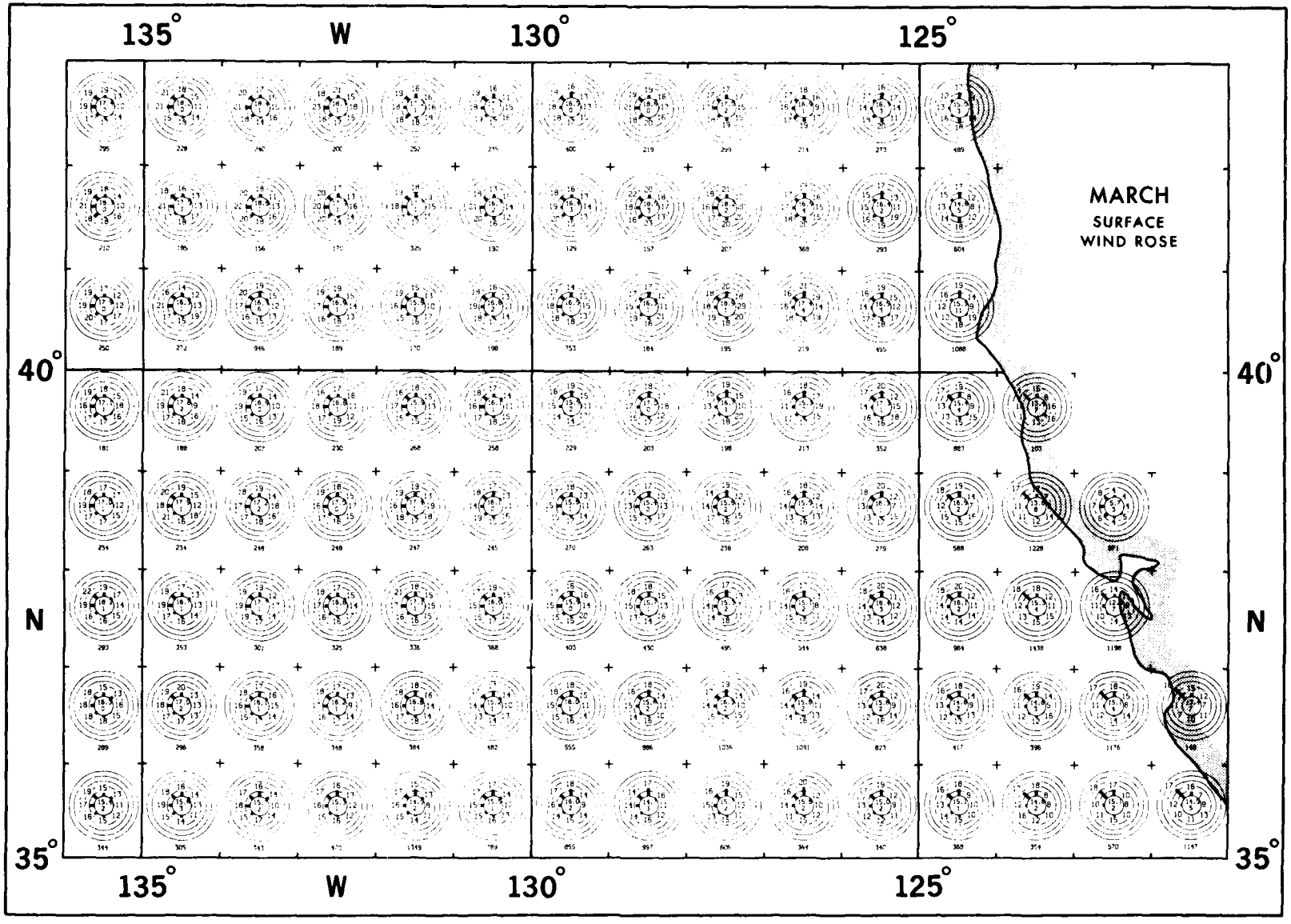

MARCH
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

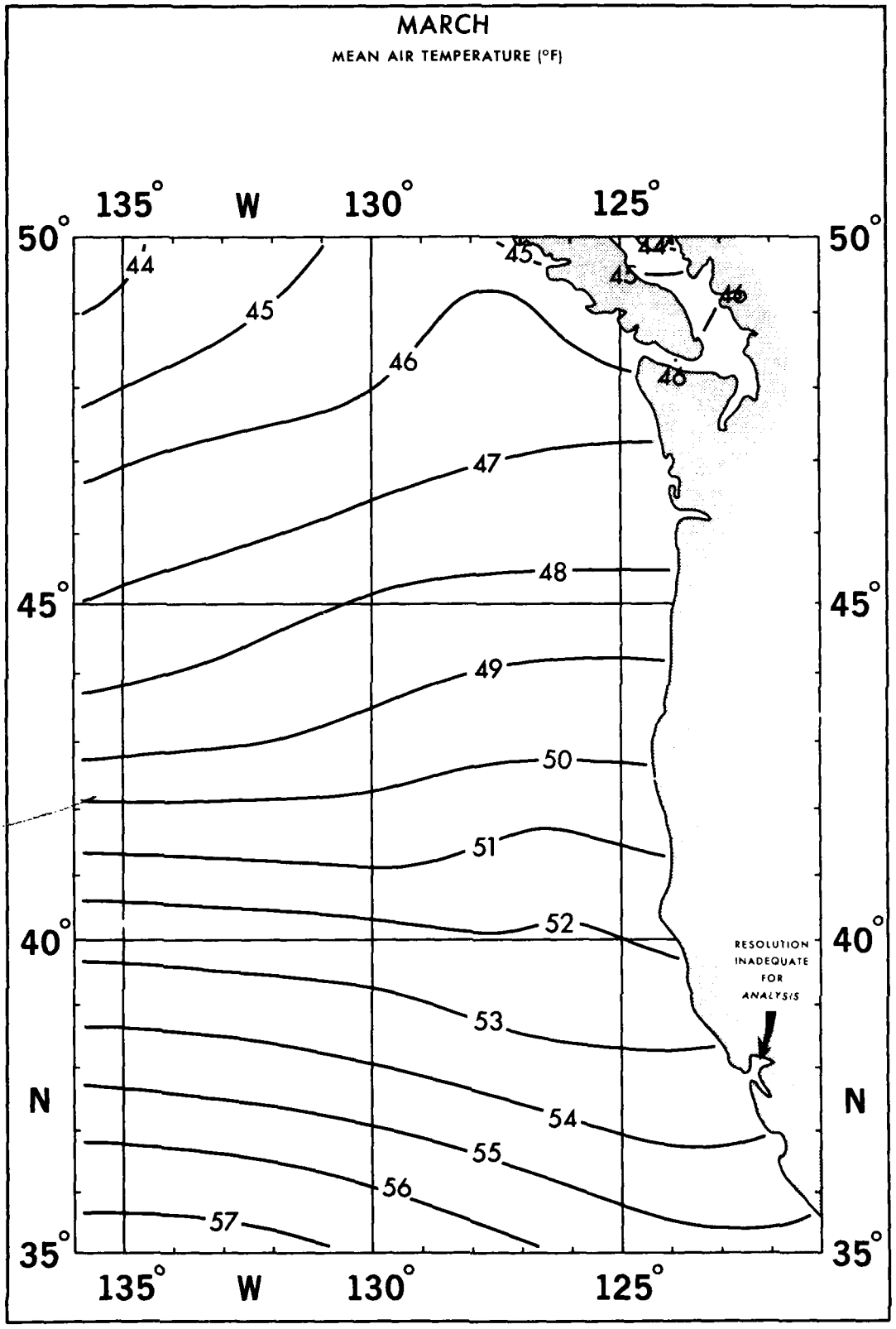

MARCH
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
N
35°
19
18
17
16
15
14
13
12
11
10
9
8
7
RESOLUTION INADEQUATE FOR ANALYSIS

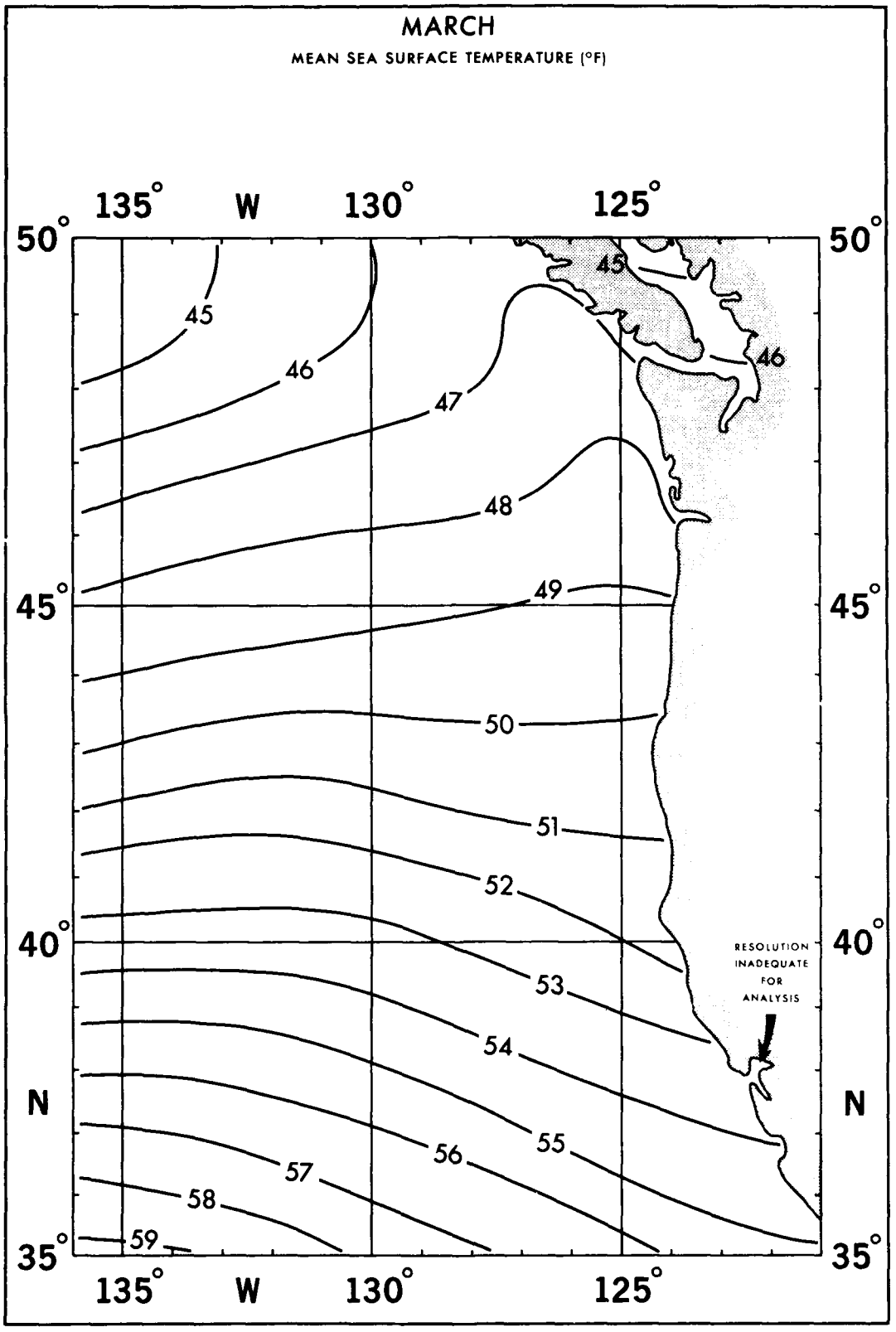

MARCH
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

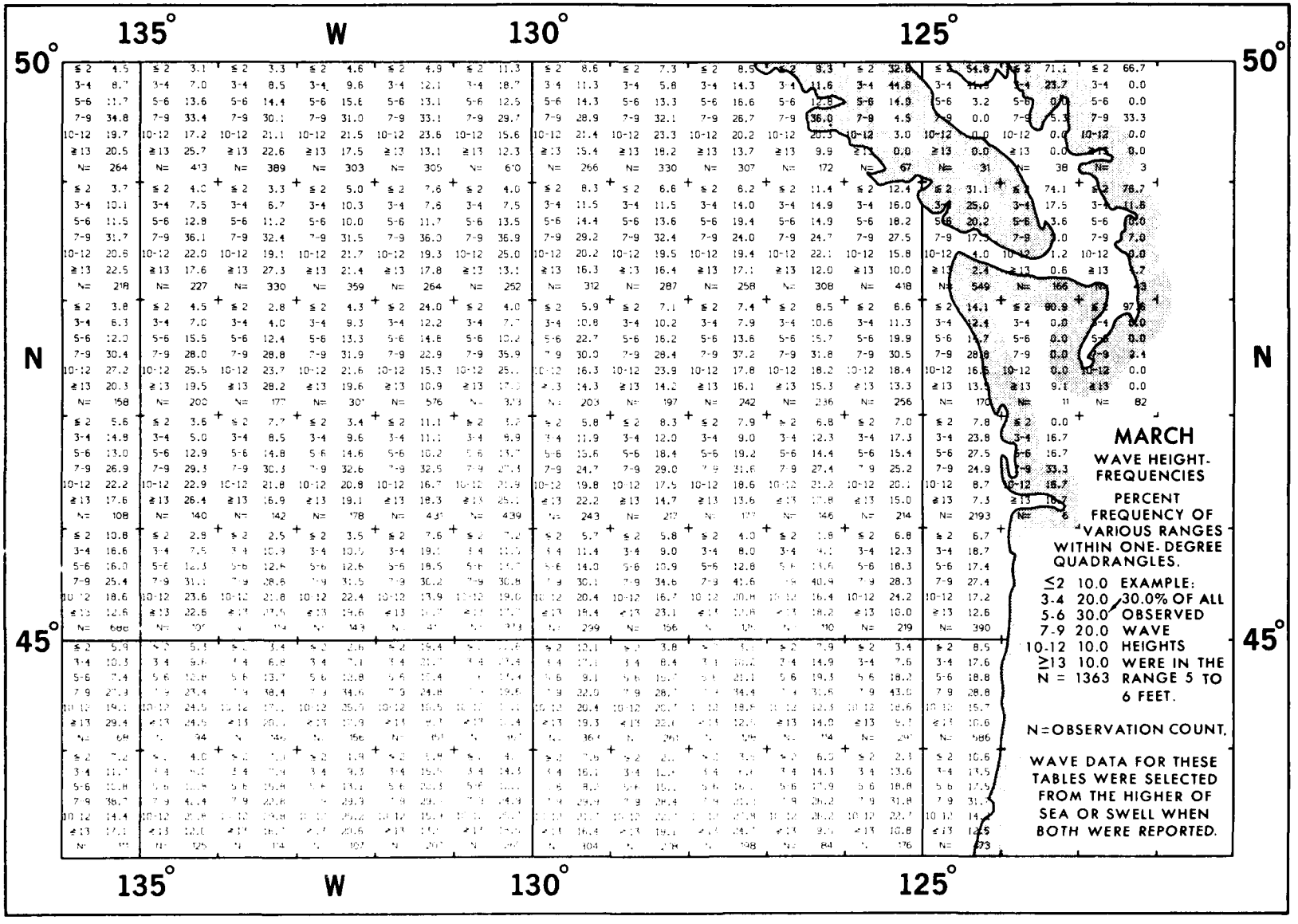

MARCH
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
10
30
20
5
30
40
10
10
20
15
20
30
>40
25
30
>40
RESOLUTION INADEQUATE FOR ANALYSIS
40
15
10
20
20

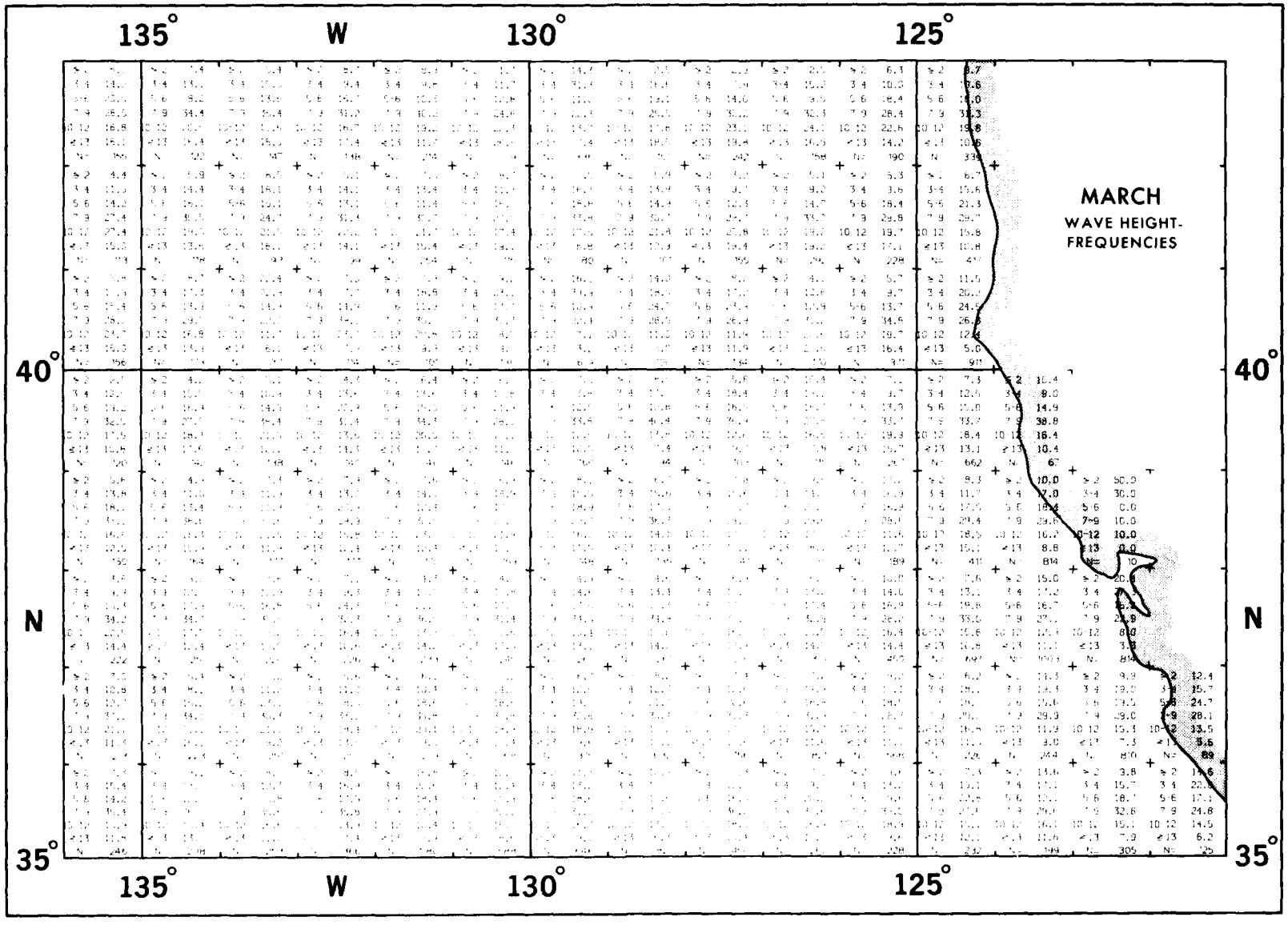

135° W 130° 125°
50°
45°
N
MARCH
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

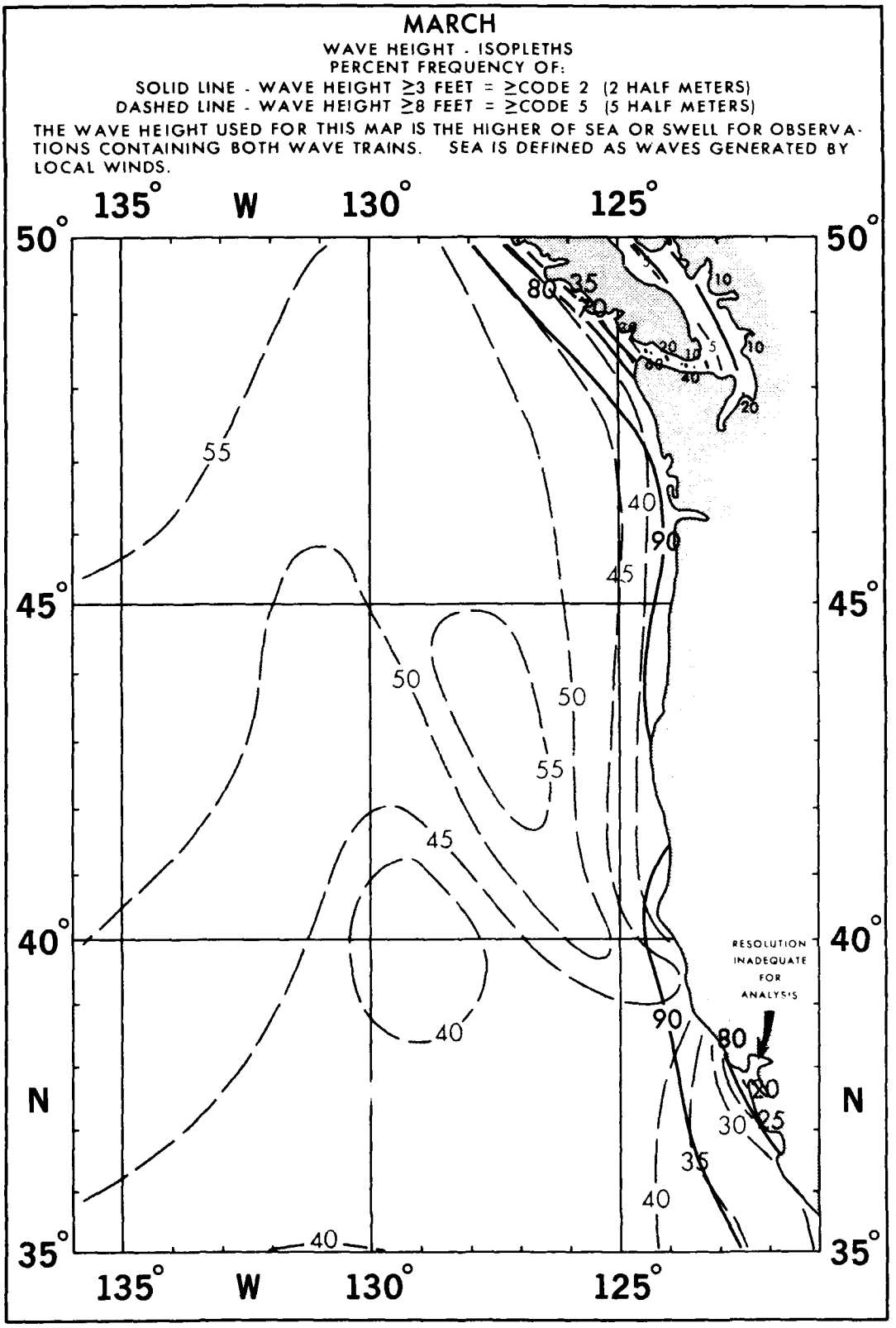

135° W 130° 125°
40°
N
35°
MARCH
SURFACE
WIND ROSE

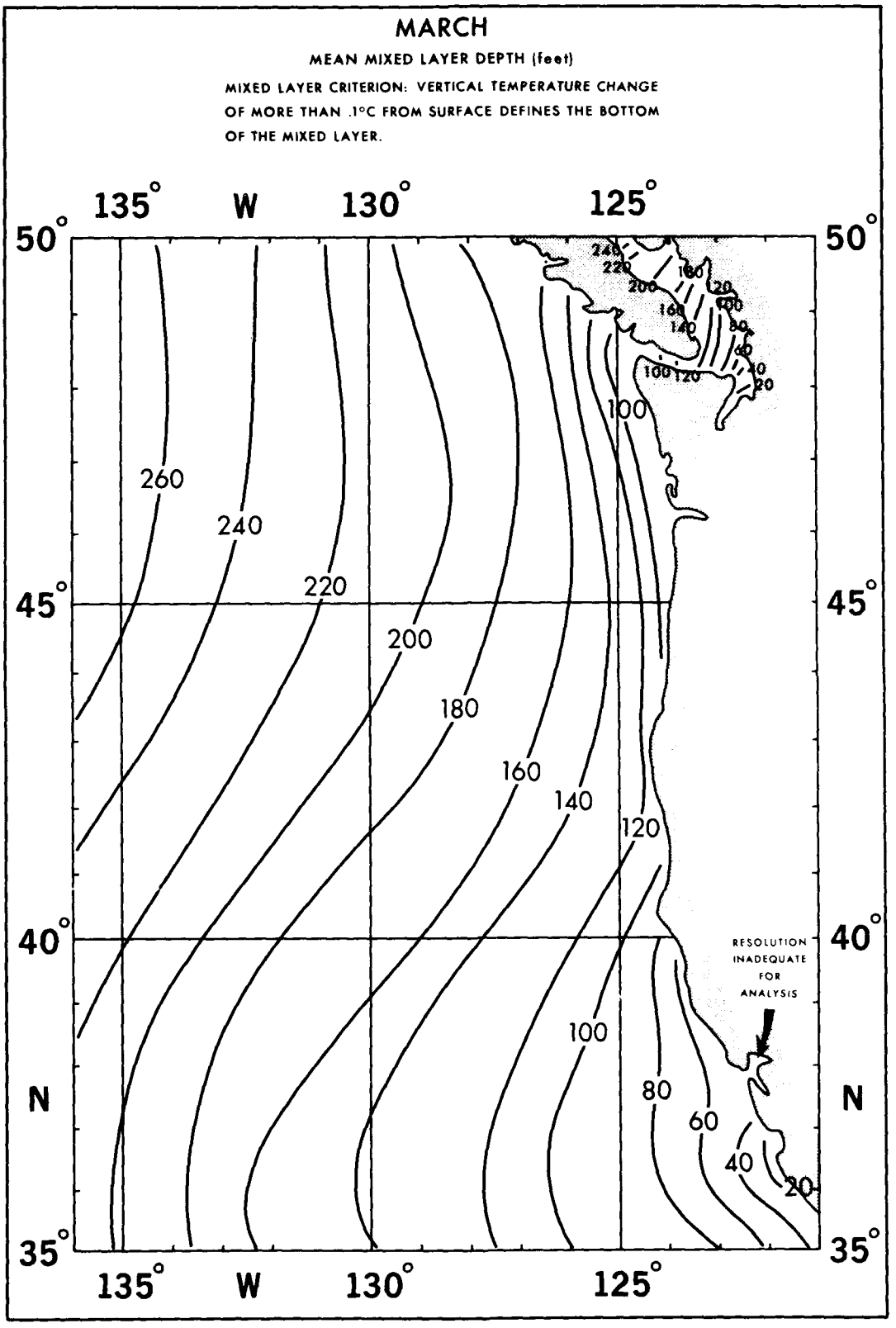

MARCH
MEAN AIR TEMPERATURE (°F)
135° W
130°
125°
50°
45°
40°
35°
N
44
45
46
47
48
49
50
51
52
53
54
55
56
57
RESOLUTION INADEQUATE FOR ANALYSIS

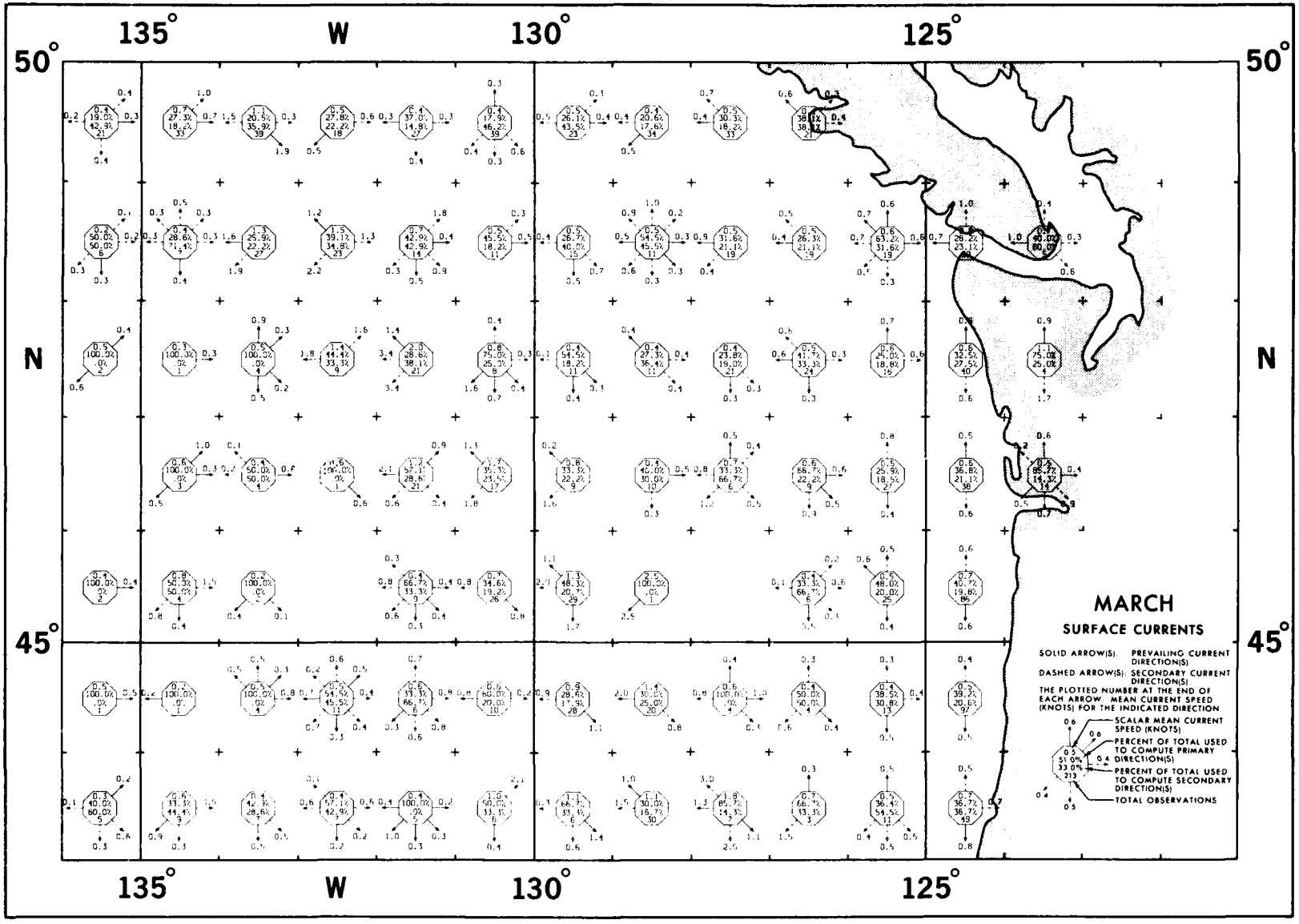

MARCH
MEAN SEA SURFACE TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
RESOLUTION INADEQUATE FOR ANALYSIS

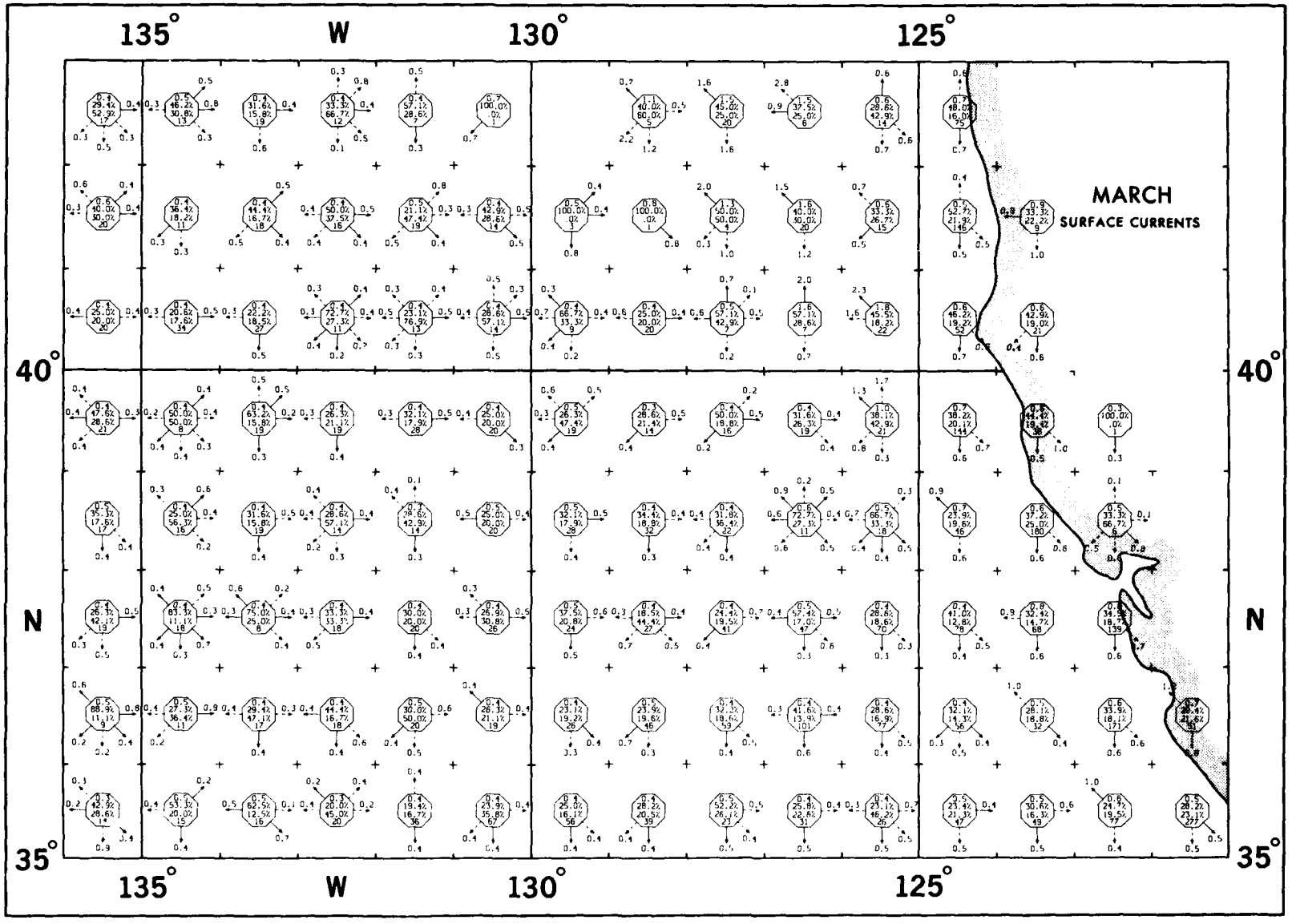

135° W 130° 125°
50°
N
45°
MARCH
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

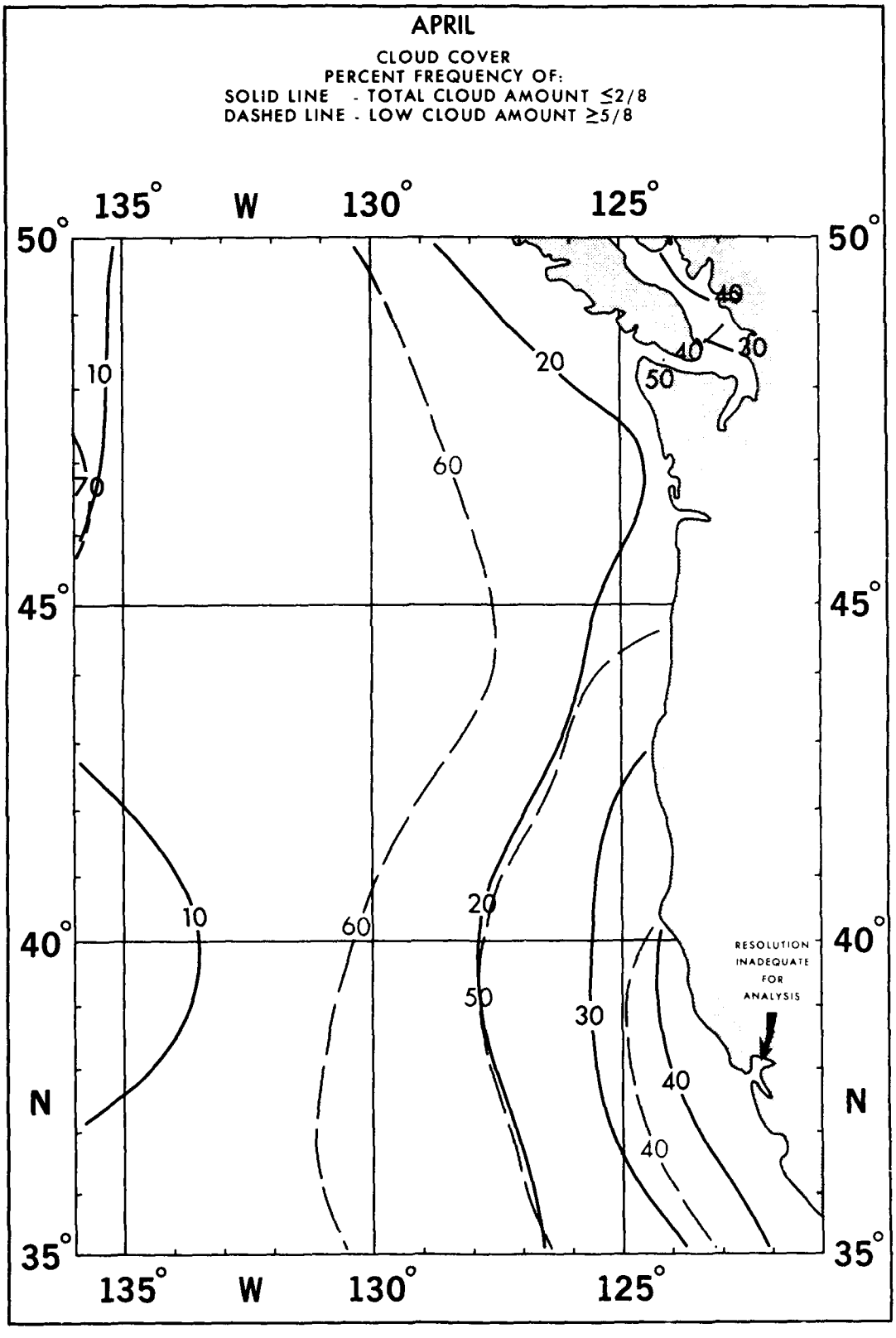

135°
W
130°
125°
40°
N
35°
MARCH
WAVE HEIGHT-
FREQUENCIES

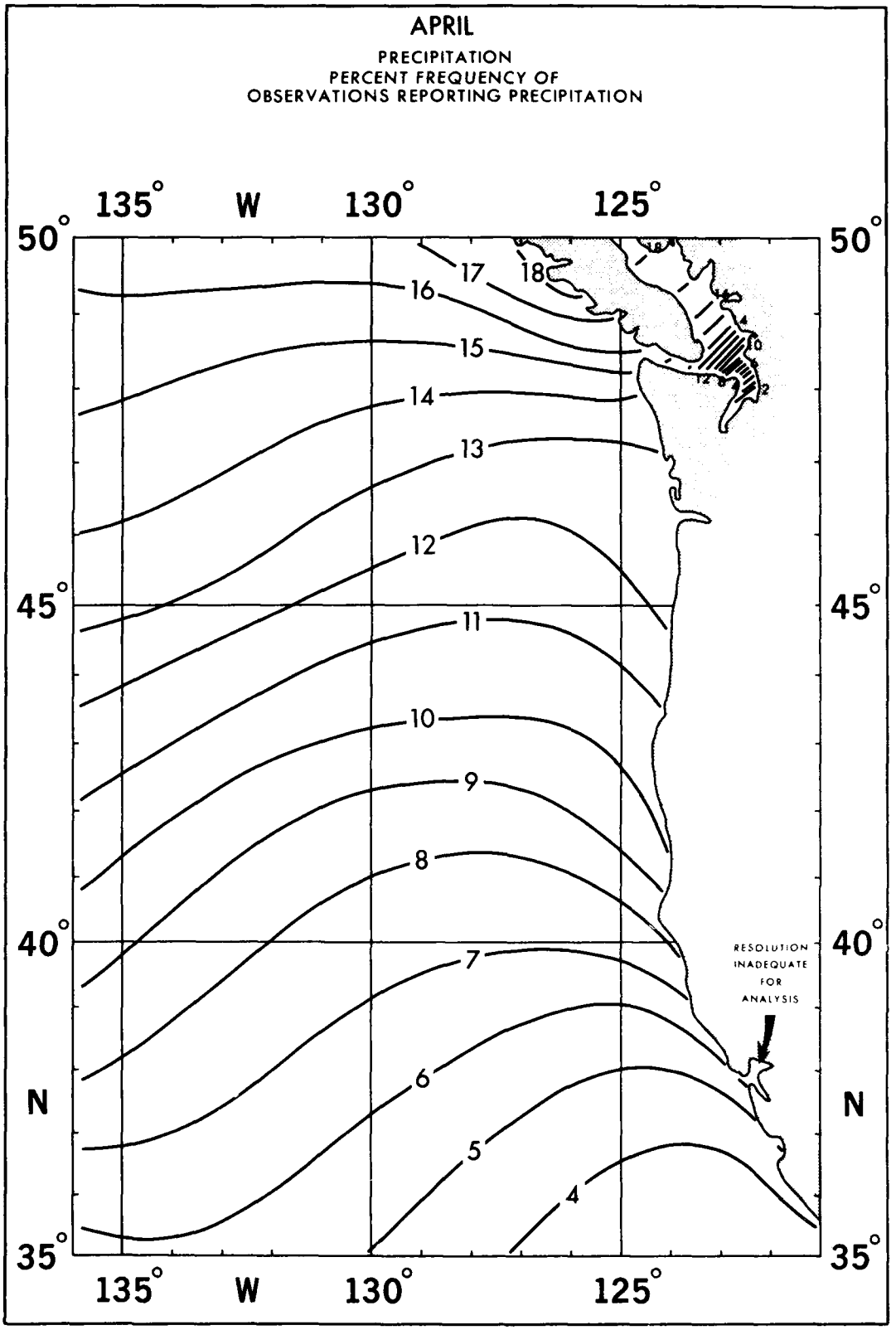

MARCH
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
55
50
45
40
90
80
35
30
25
20
10
5

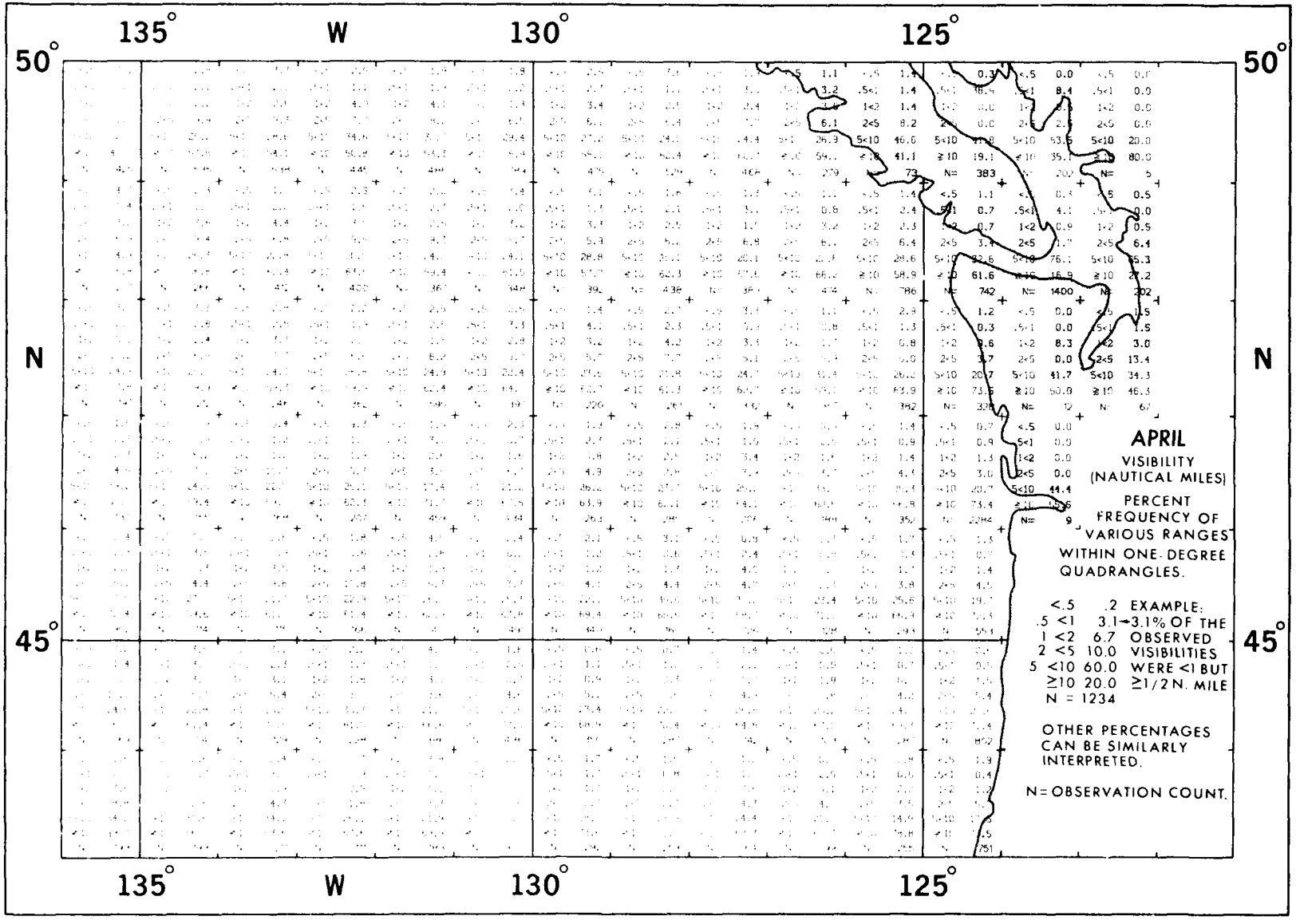

MARCH
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W
130°
125°
50°
45°
40°
35°
N
260
240
220
200
180
160
140
120
100
80
60
40
20
RESOLUTION INADEQUATE FOR ANALYSIS

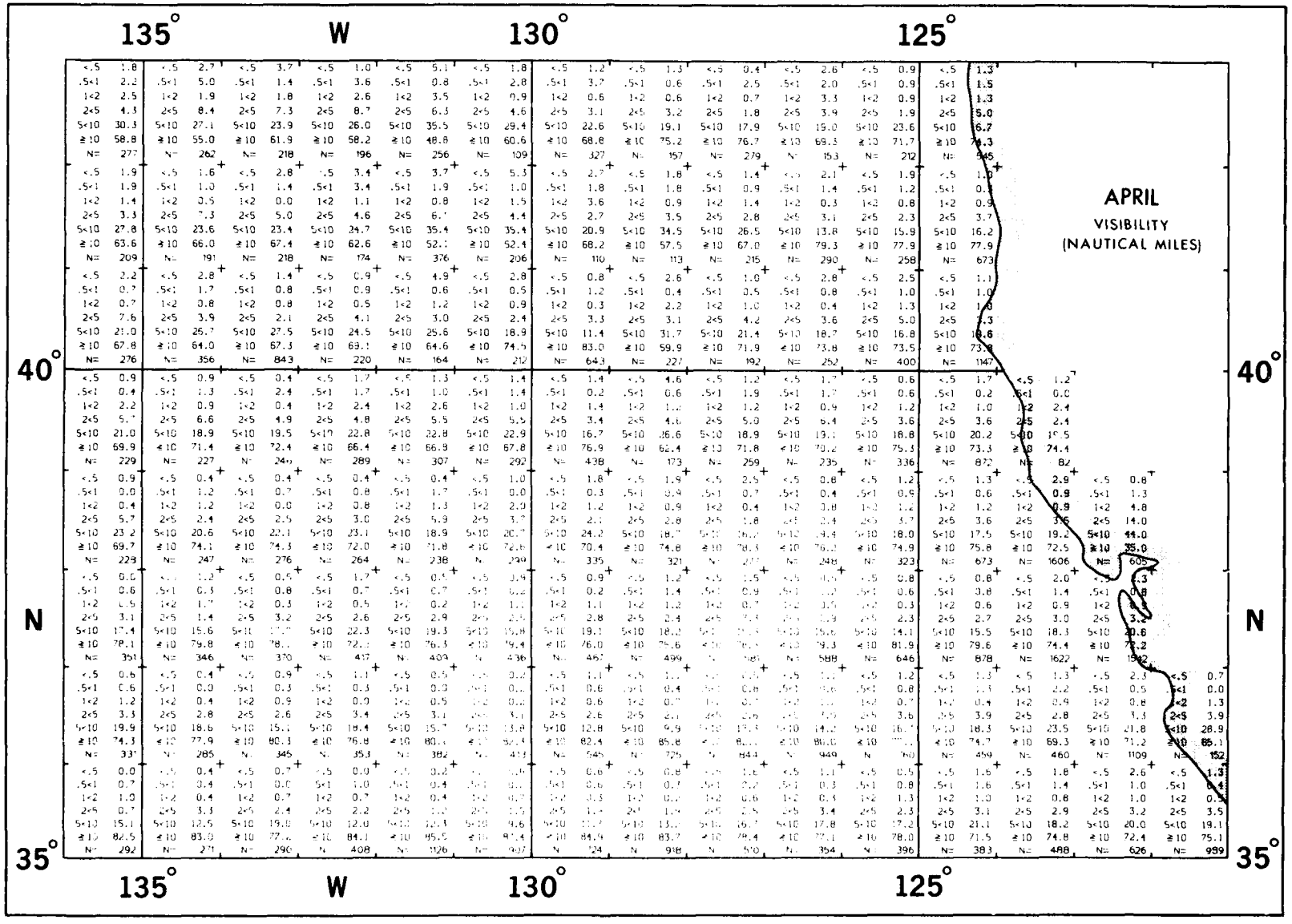

135° W 130° 125°
50°
45°
N
MARCH
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION.
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

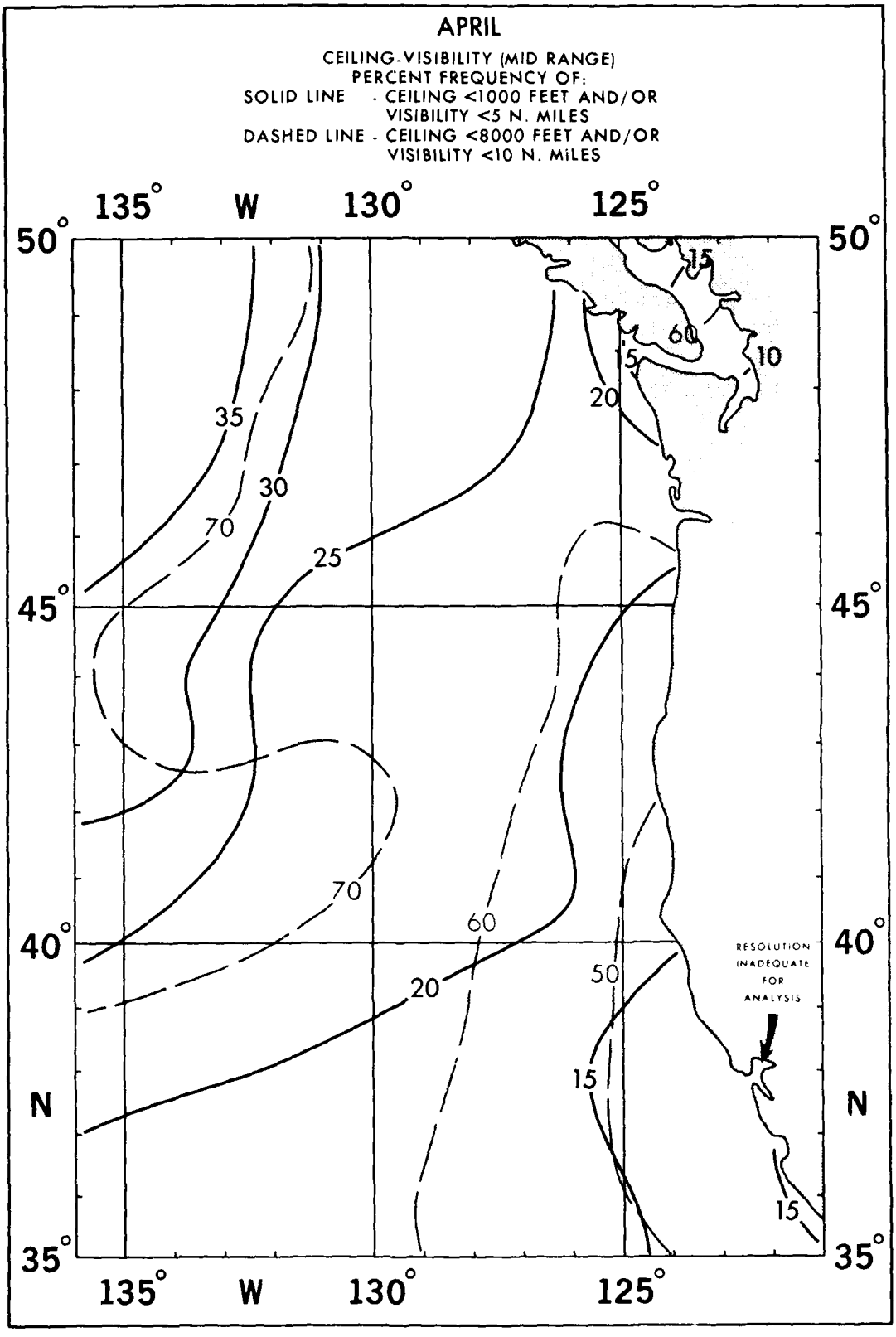

135° W
130°
125°
40°
N
35°
MARCH
SURFACE CURRENTS

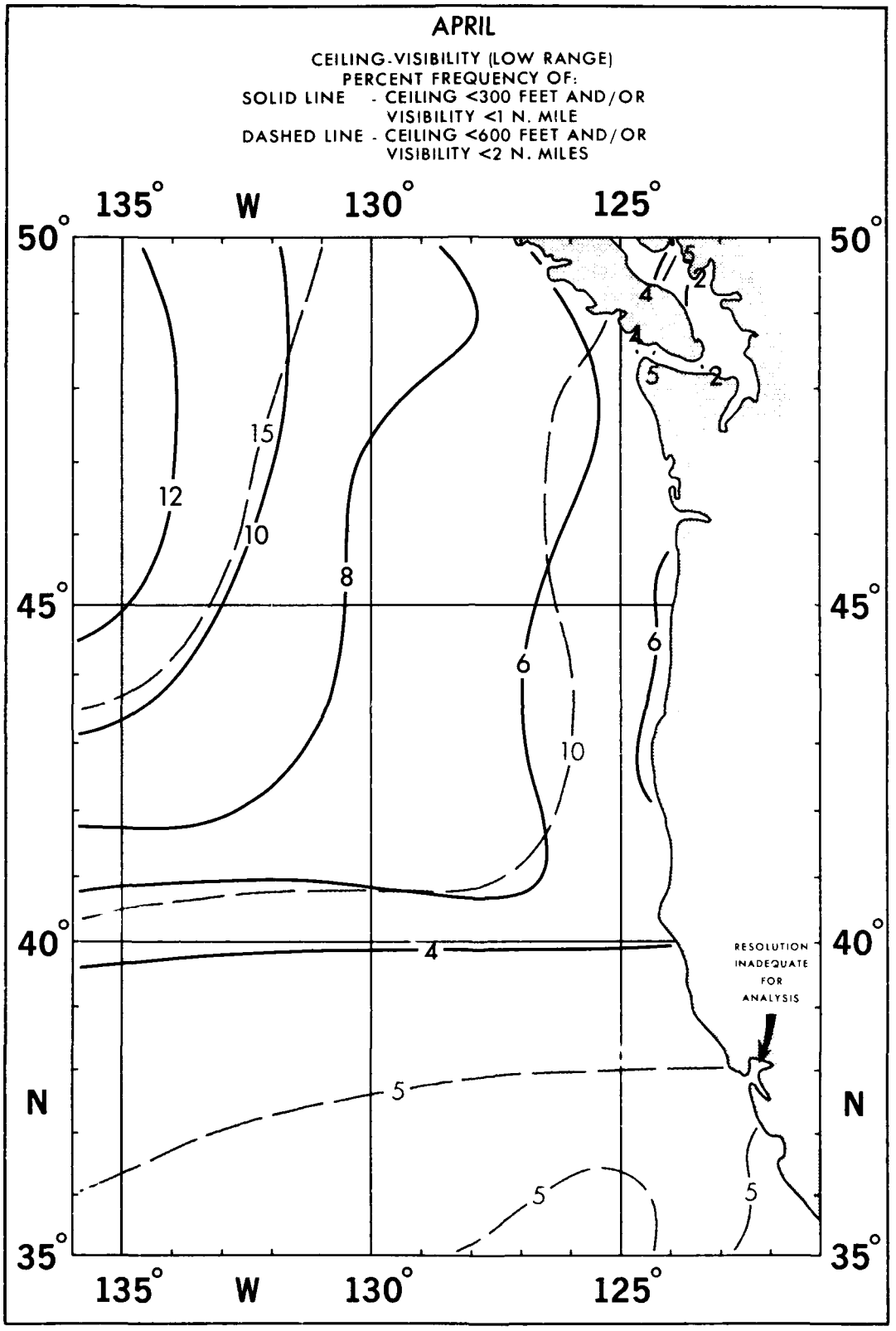

APRIL
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
10
20
30
40
50
60
70
RESOLUTION INADEQUATE FOR ANALYSIS

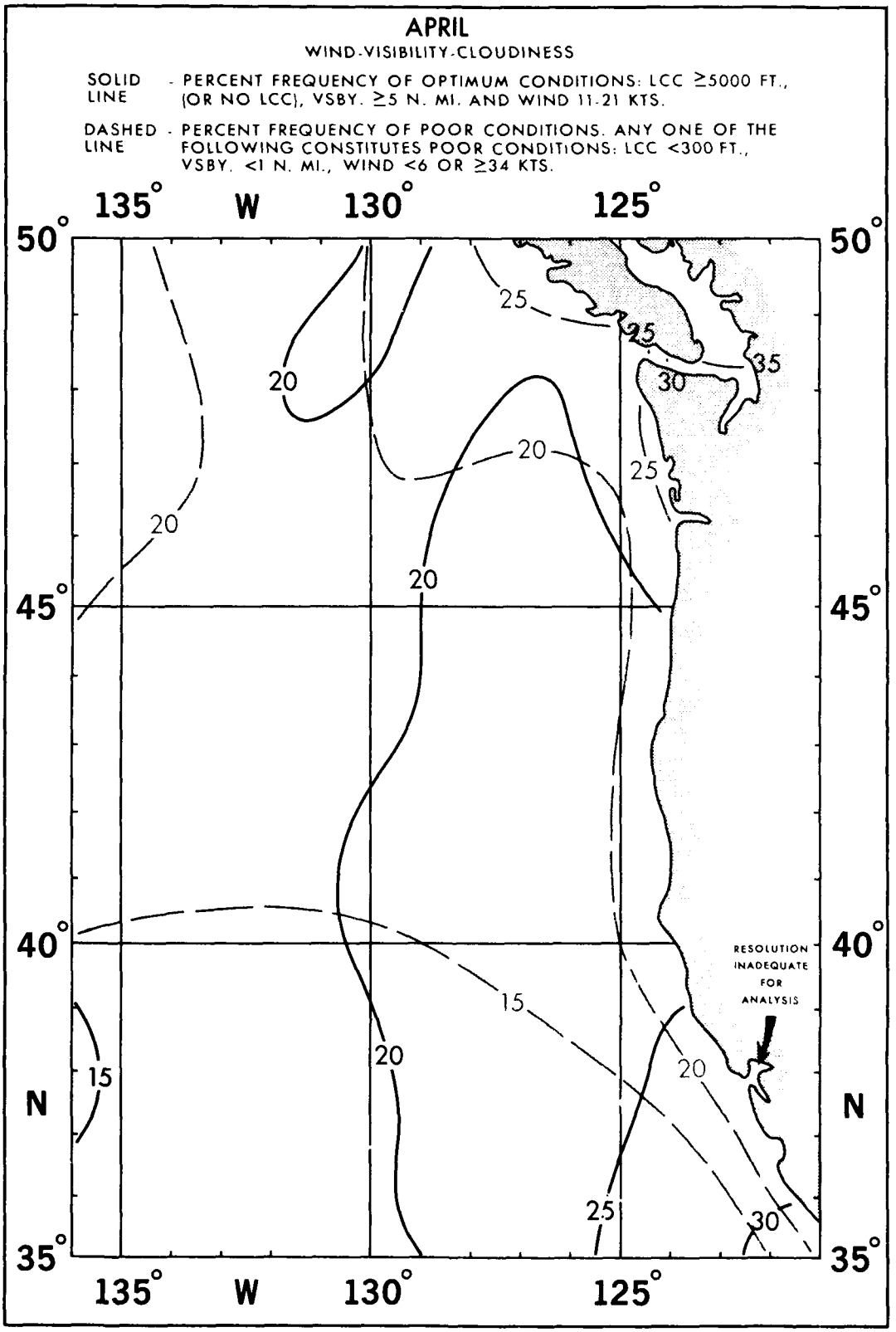

APRIL
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
17
18
16
15
14
13
12
11
10
9
8
7
6
5
4
RESOLUTION
INADEQUATE
FOR
ANALYSIS

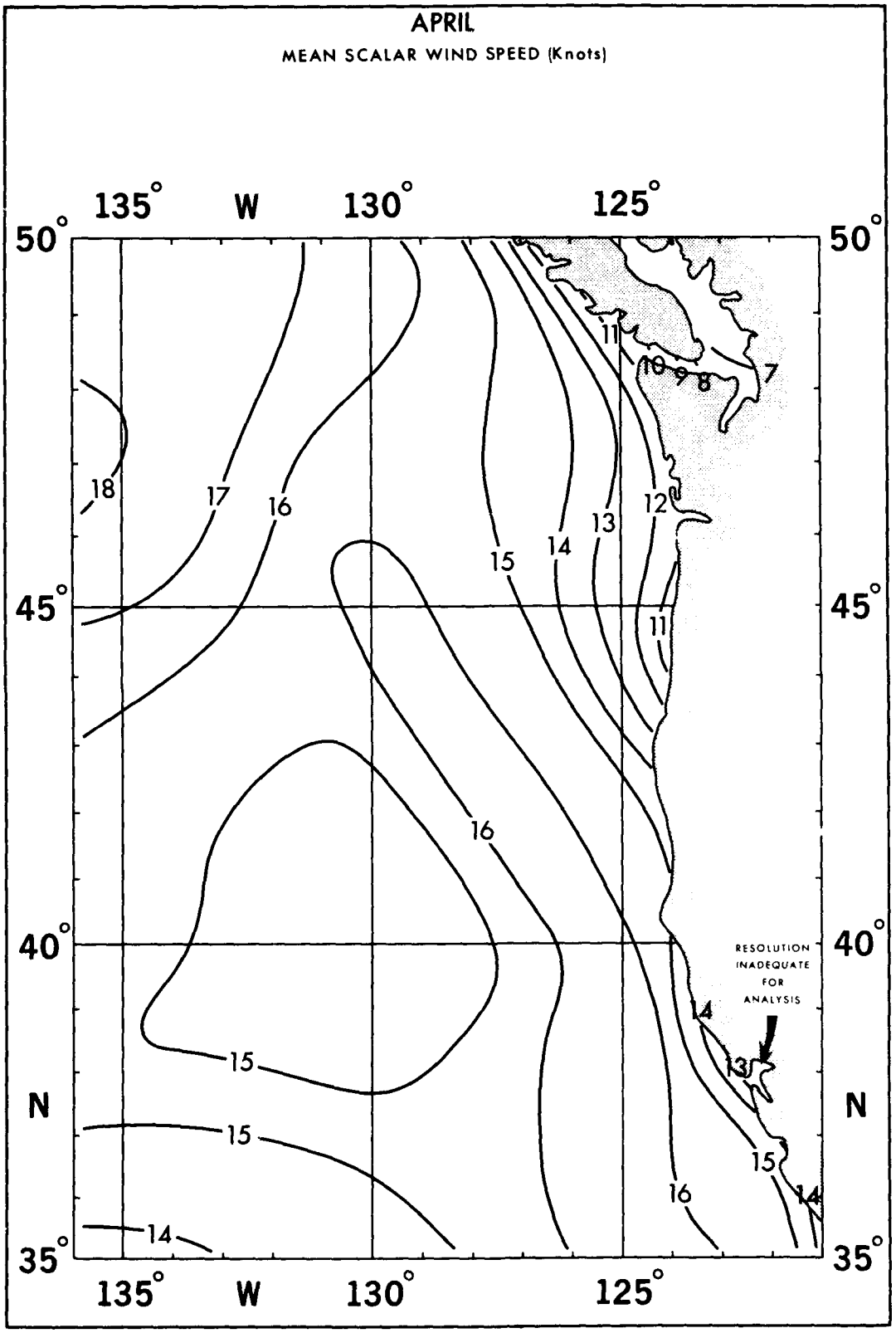

135° W 130° 125°
50°
45°
N
APRIL
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1 → 3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N = OBSERVATION COUNT.

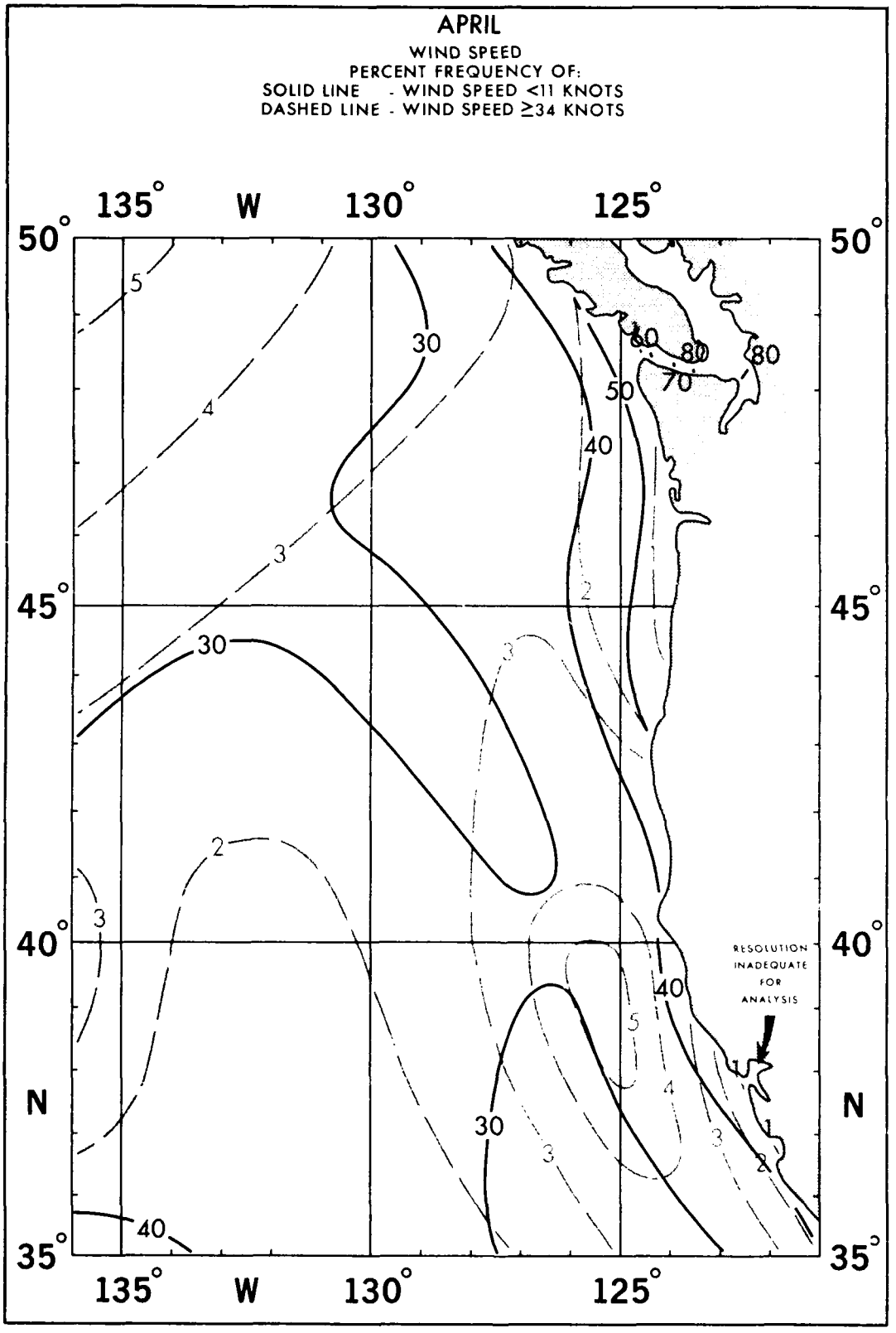

135° W 130° 125°
40°
N
35°
APRIL
VISIBILITY
(NAUTICAL MILES)

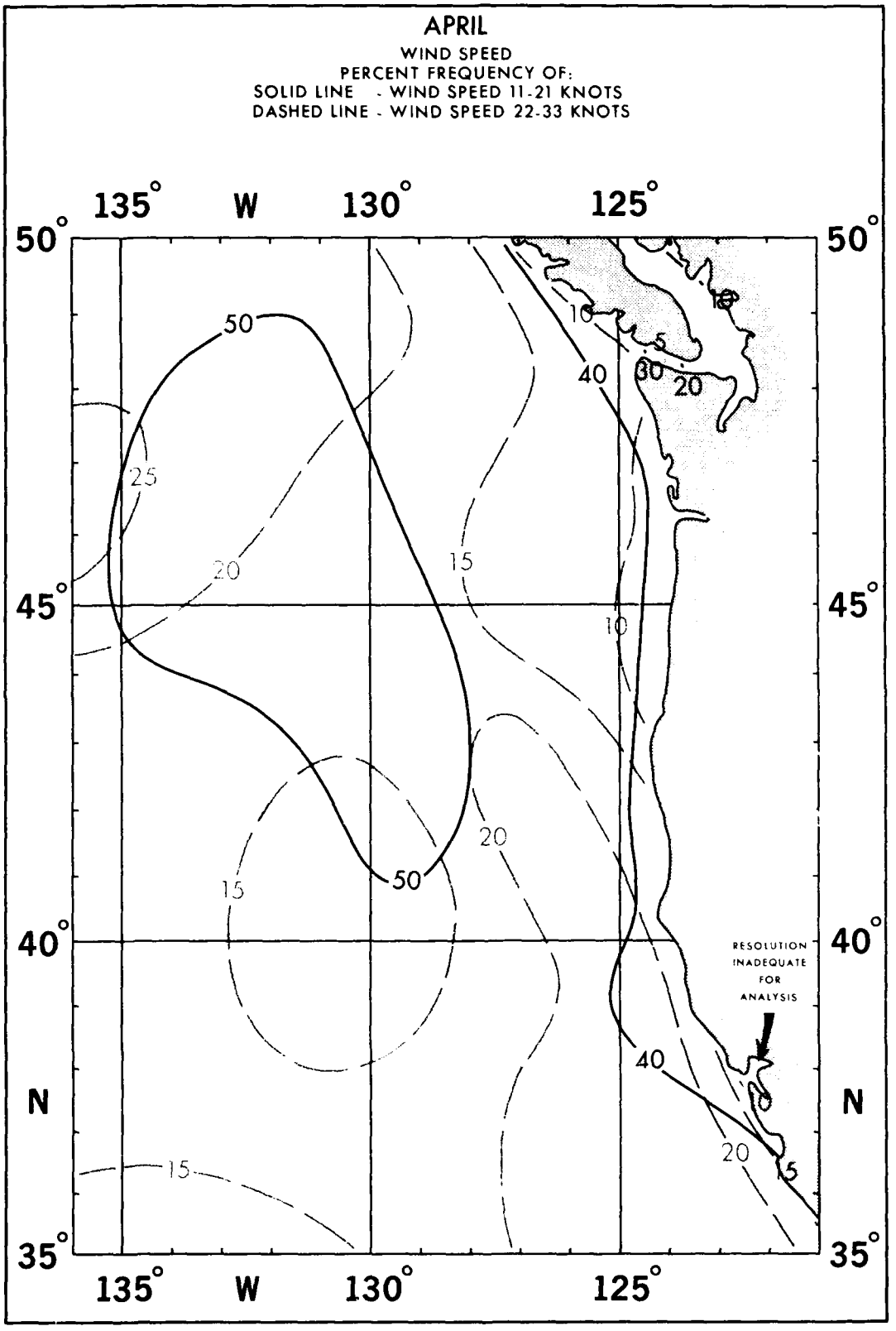

APRIL
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
35
30
70
25
70
60
20
20
15
60
15
10
50
15
15
RESOLUTION INADEQUATE FOR ANALYSIS

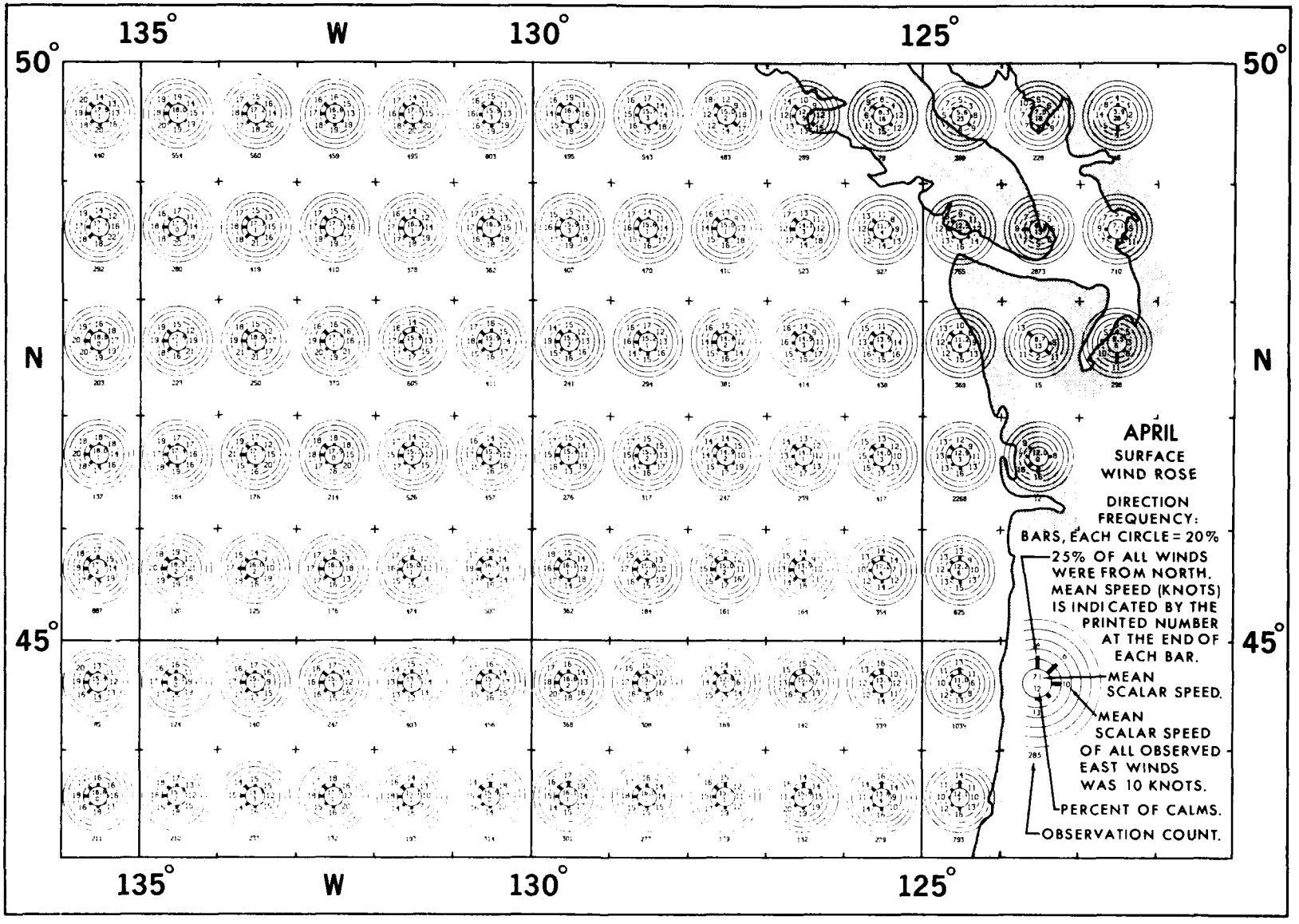

APRIL
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
15
12
10
8
6
4
5
2
1

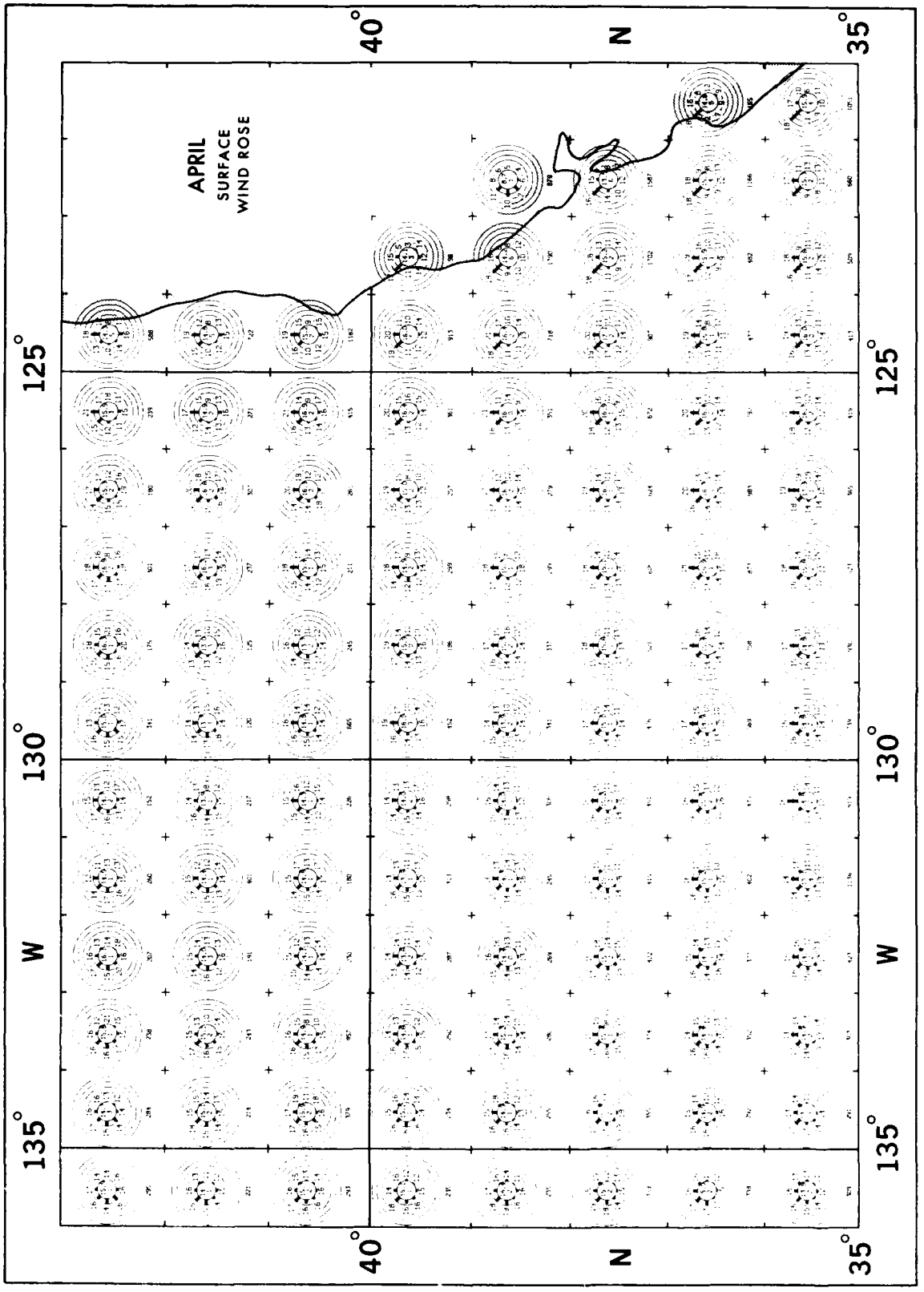

APRIL
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
20
25
30
35
15
RESOLUTION INADEQUATE FOR ANALYSIS

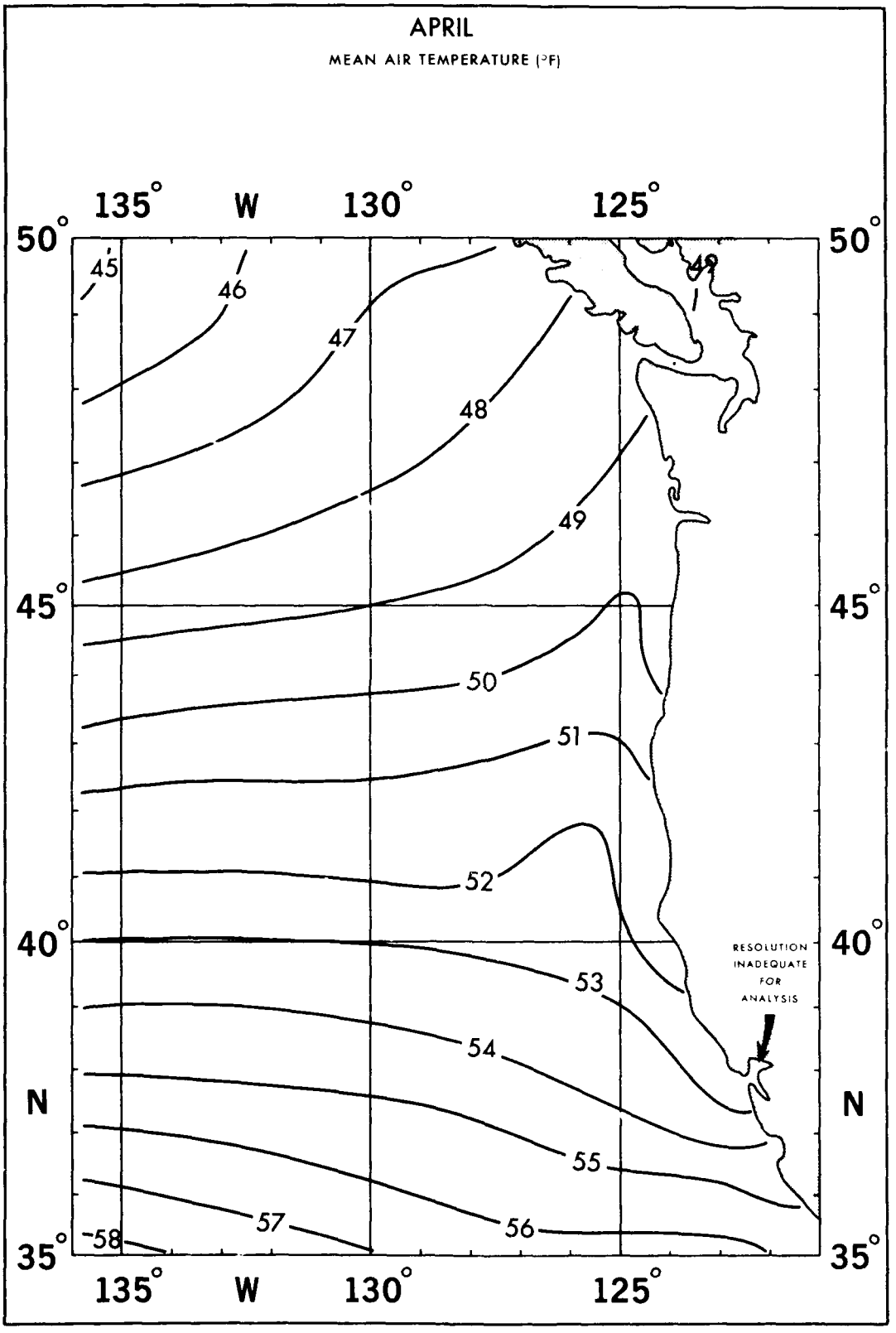

APRIL
MEAN SCALAR WIND SPEED (Knots)
135° W
130°
125°
50°
45°
40°
35°
N
18
17
16
15
14
13
12
11
10
9
8
7
RESOLUTION INADEQUATE FOR ANALYSIS

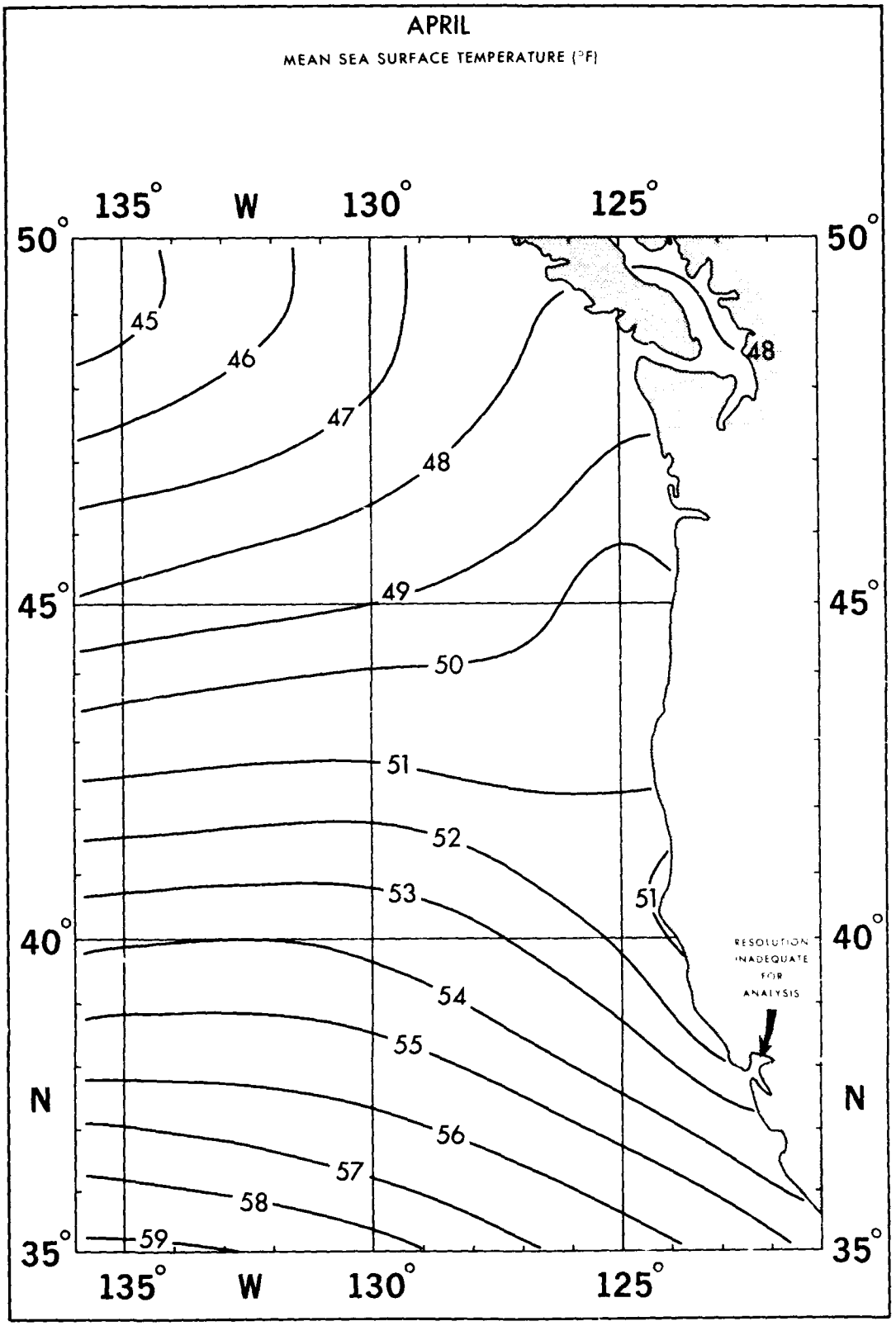

APRIL
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

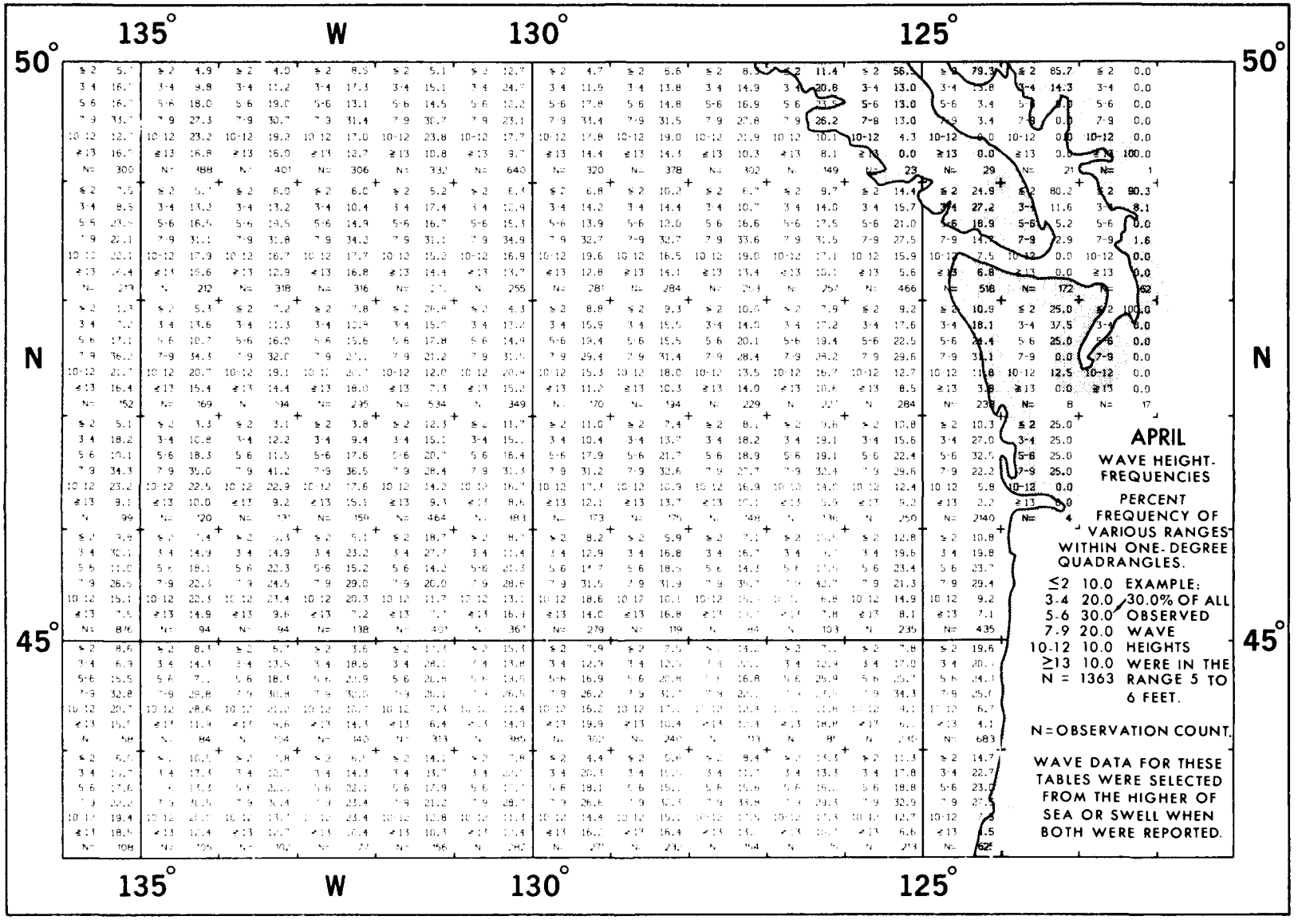

APRIL
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
50
25
20
15
10
5
40
30
20
50
20
15
10
40
20
15
RESOLUTION INADEQUATE FOR ANALYSIS

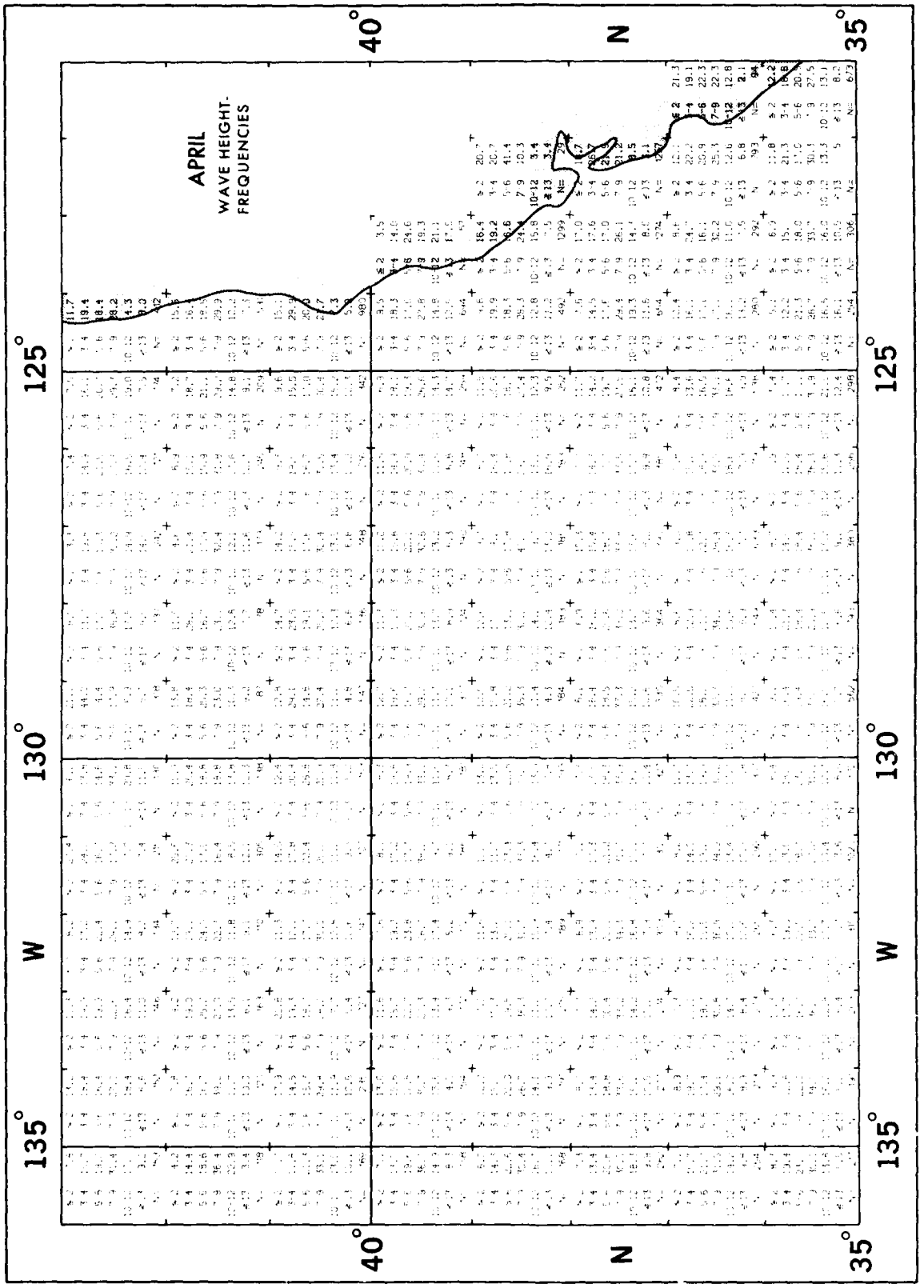

135° W 130° 125°
50°
N
45°
APRIL
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

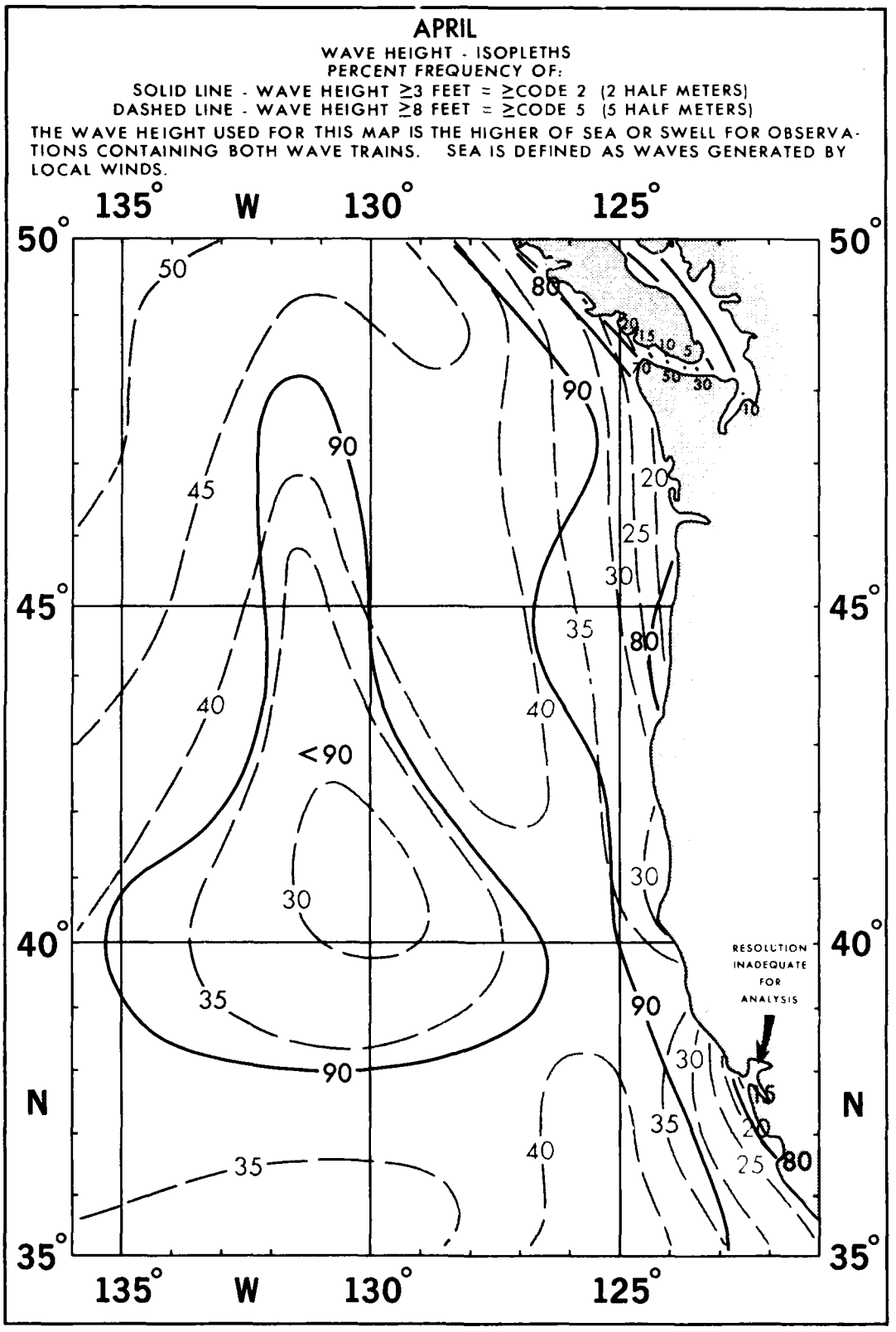

APRIL
SURFACE
WIND ROSE
40°
N
35°
125°
130°
W
135°

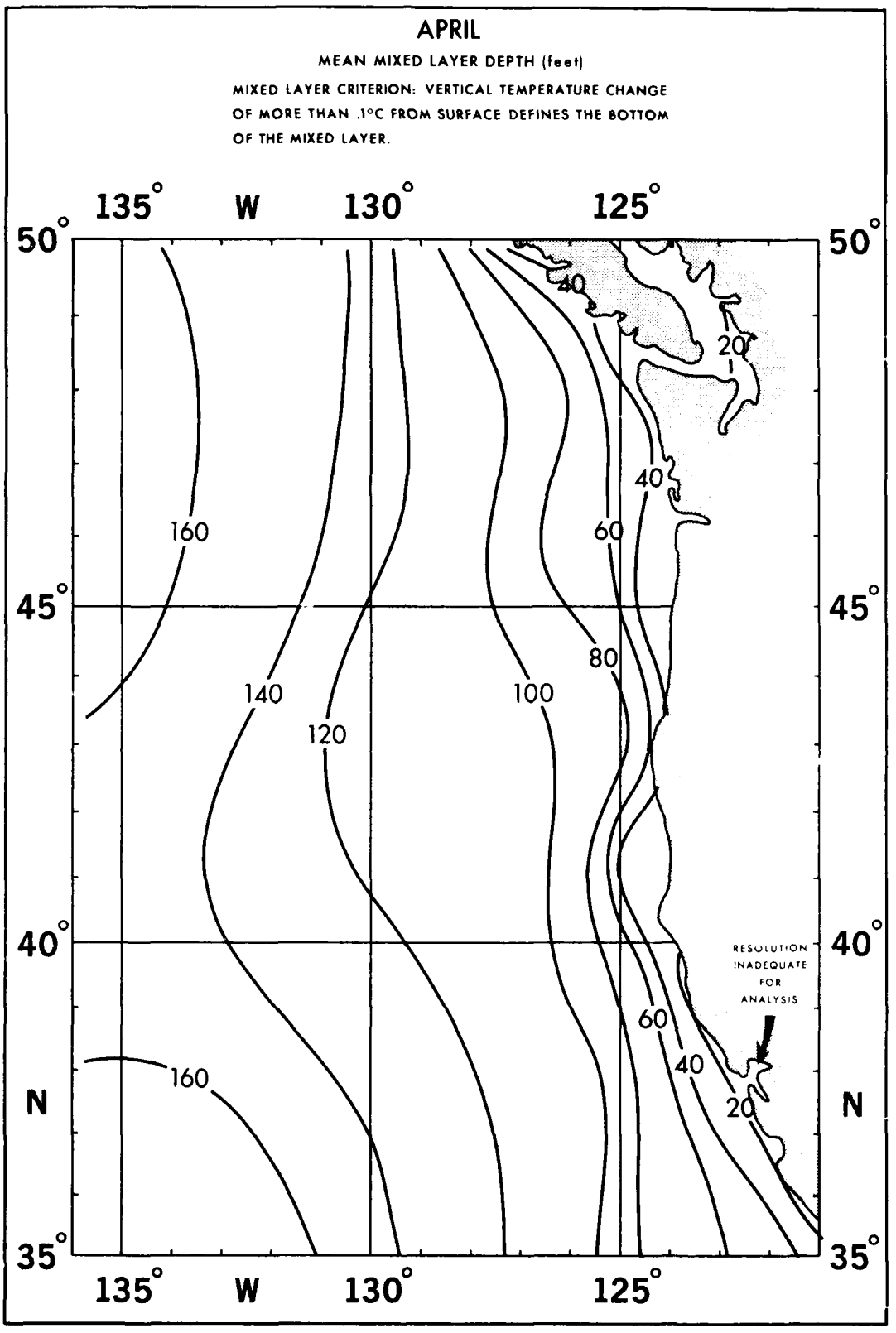

APRIL
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
45
46
47
48
49
50
51
52
53
54
55
56
57
58
RESOLUTION INADEQUATE FOR ANALYSIS

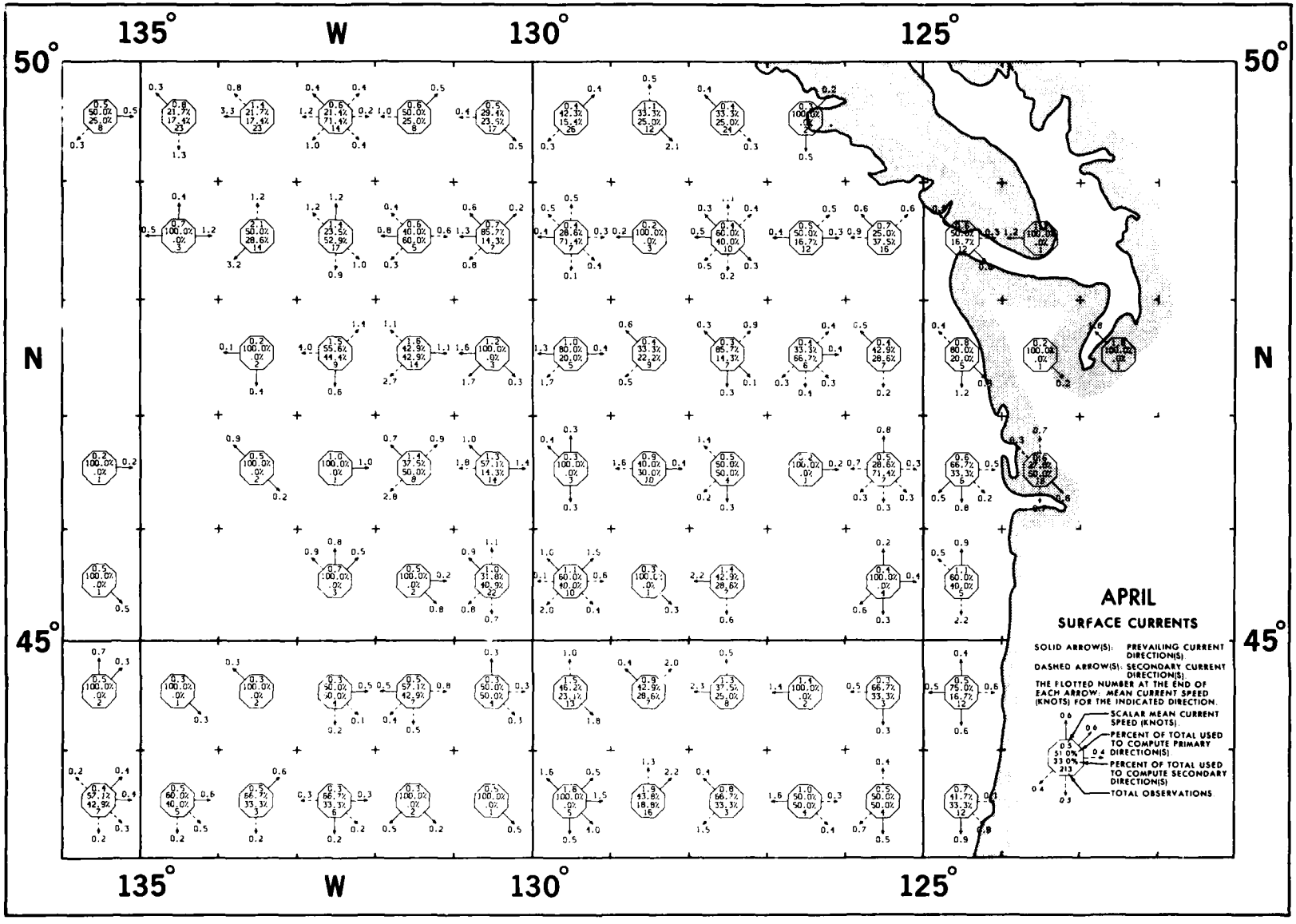

APRIL
MEAN SEA SURFACE TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
48
51
RESOLUTION INADEQUATE FOR ANALYSIS

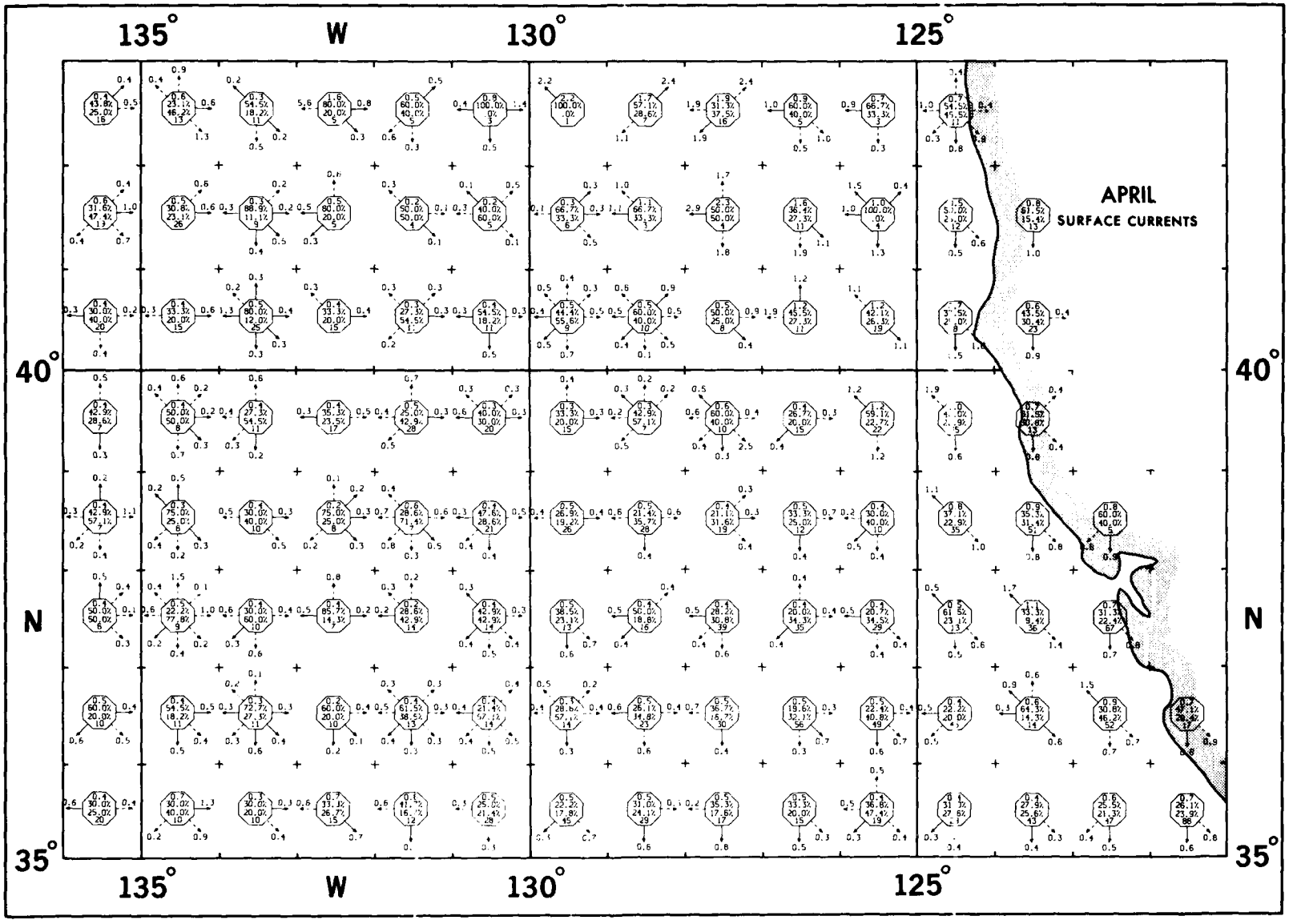

135° W 130° 125°
50°
N
45°
APRIL
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

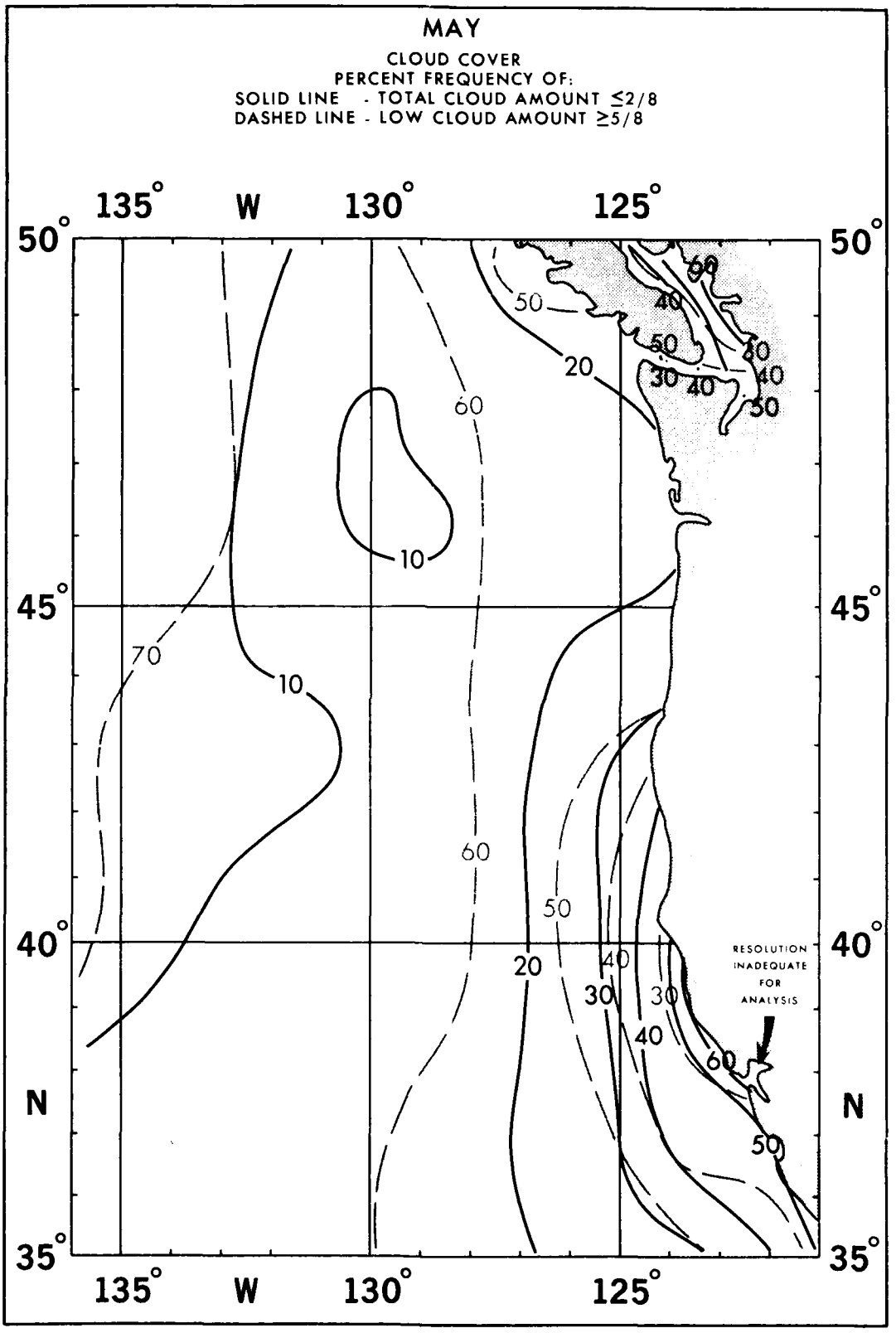

APRIL
WAVE HEIGHT-
FREQUENCIES
40°
N
35°
125°
130°
W
135°

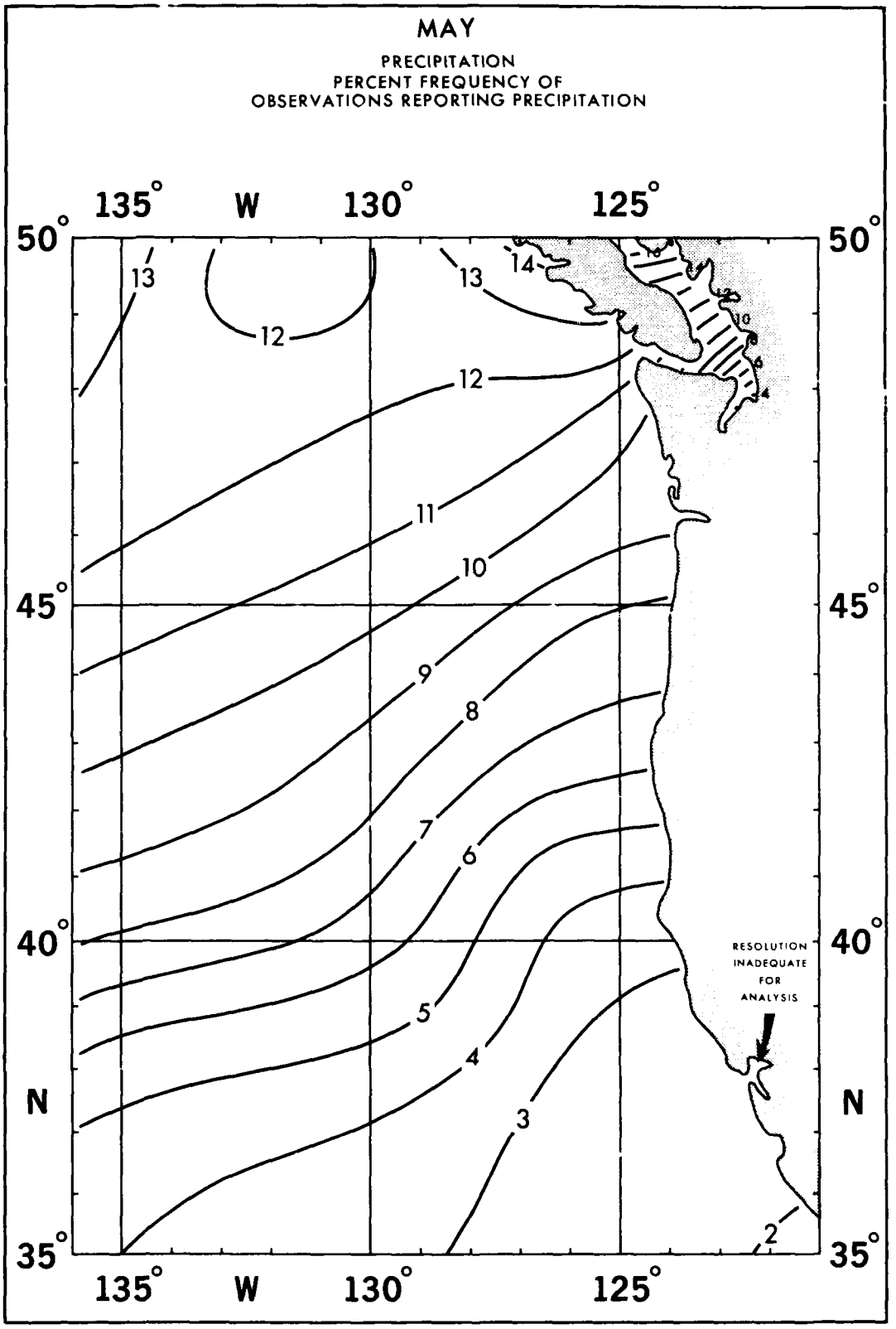

APRIL
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
<90

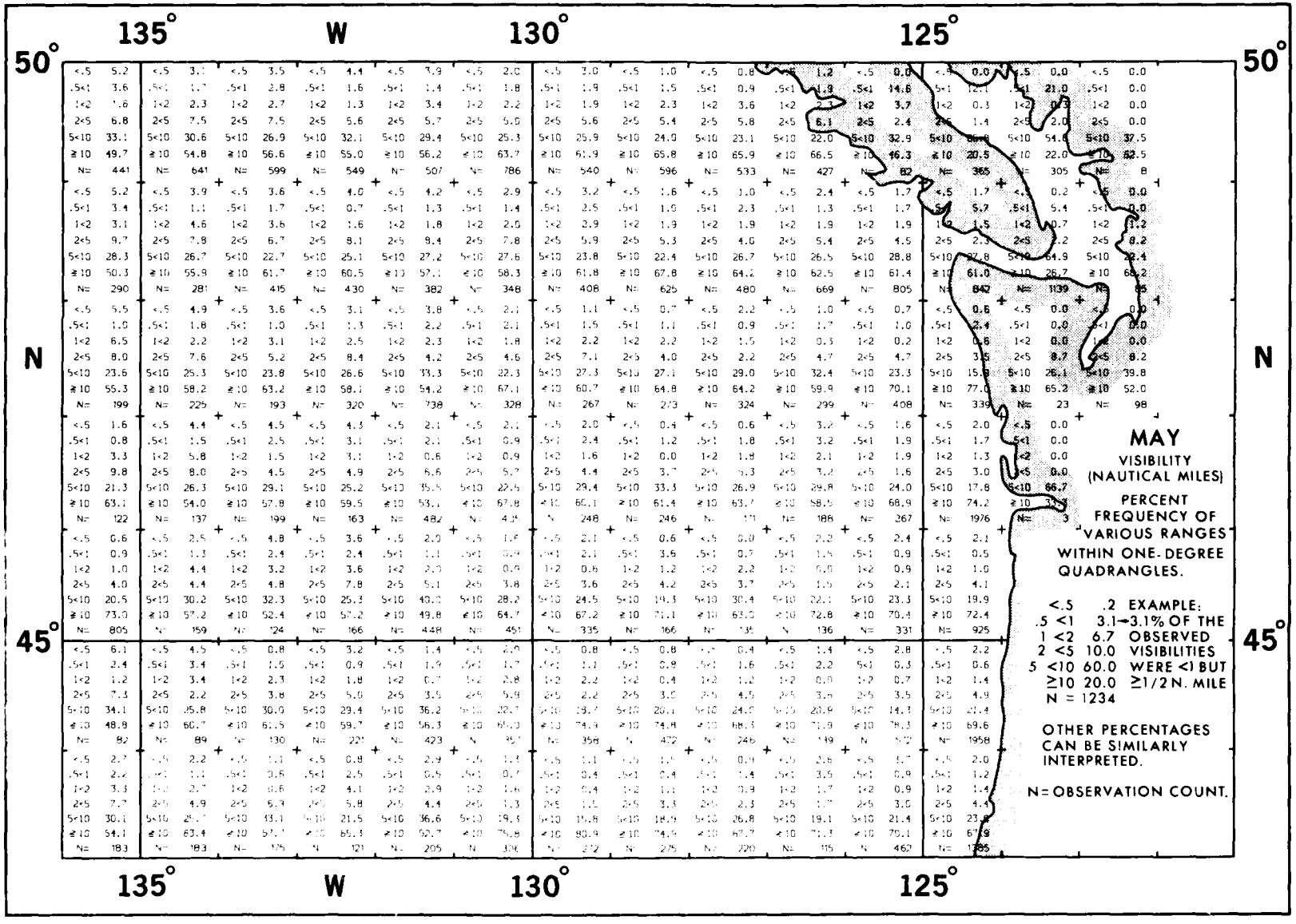

APRIL
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W
130°
125°
50°
45°
40°
35°
N
160
140
120
100
80
60
40
20
RESOLUTION INADEQUATE FOR ANALYSIS

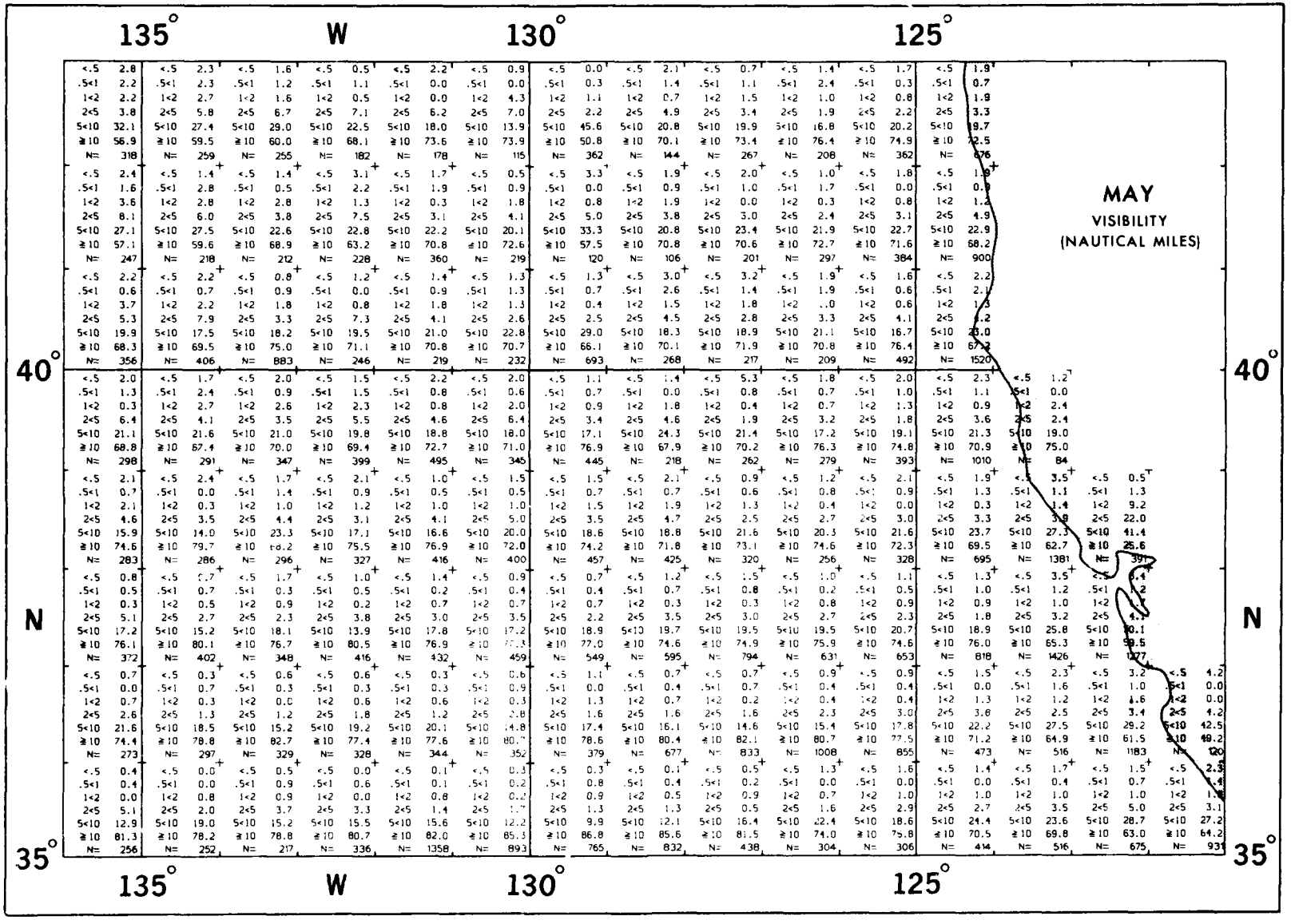

135° W 130° 125°
50°
45°
N
APRIL
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW: MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION.
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

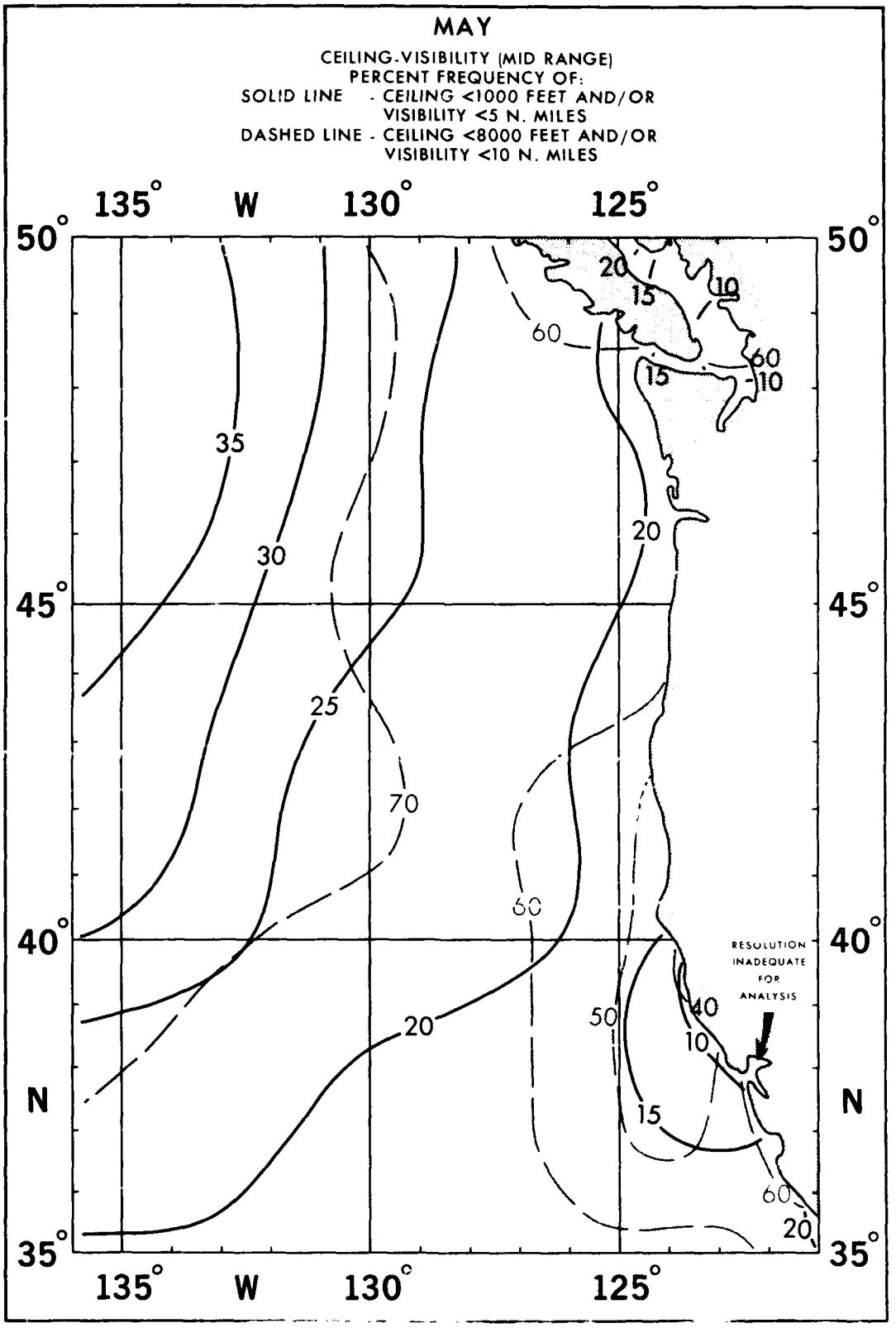

135° W 130° 125°
40°
N
35°
APRIL
SURFACE CURRENTS

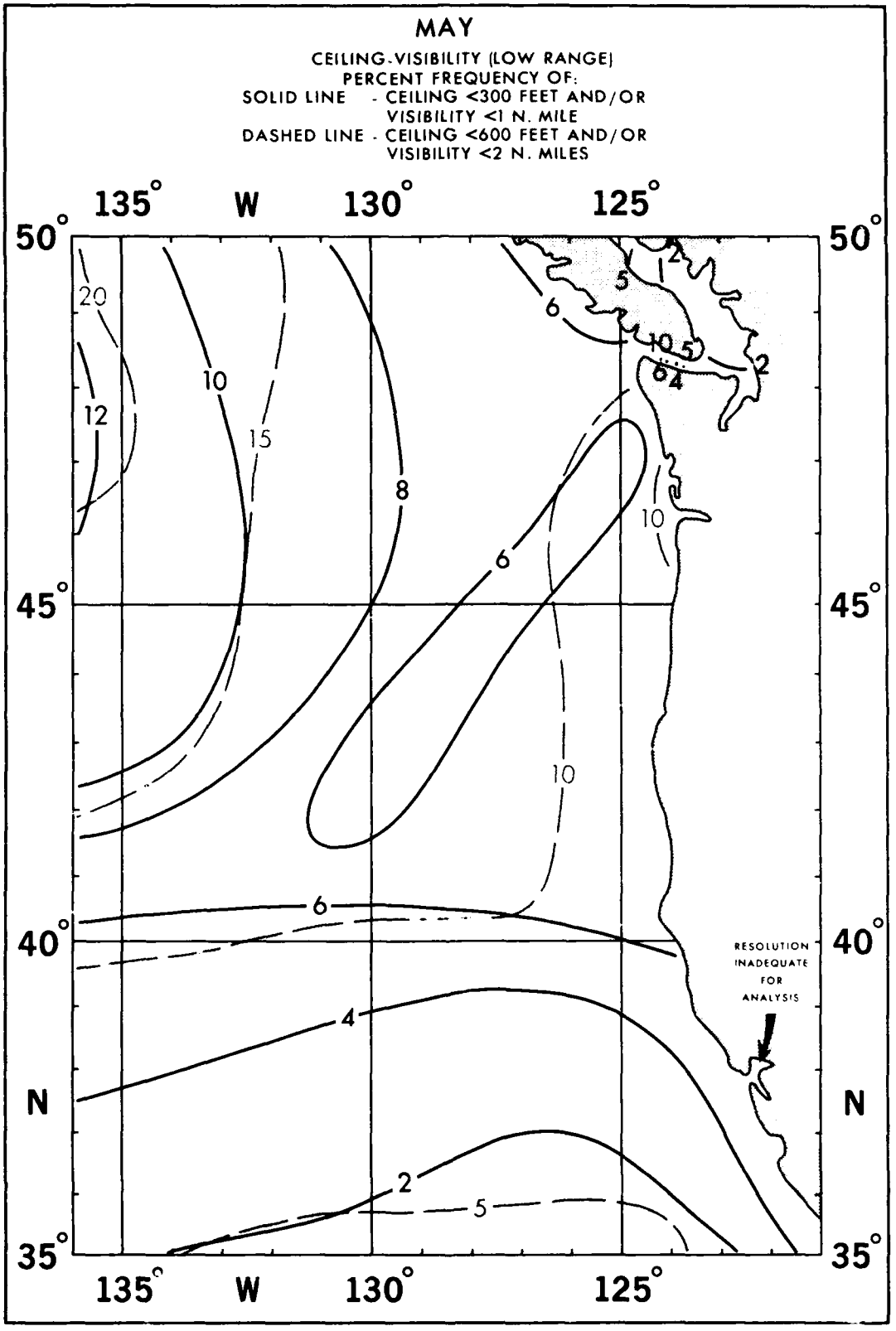

MAY
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

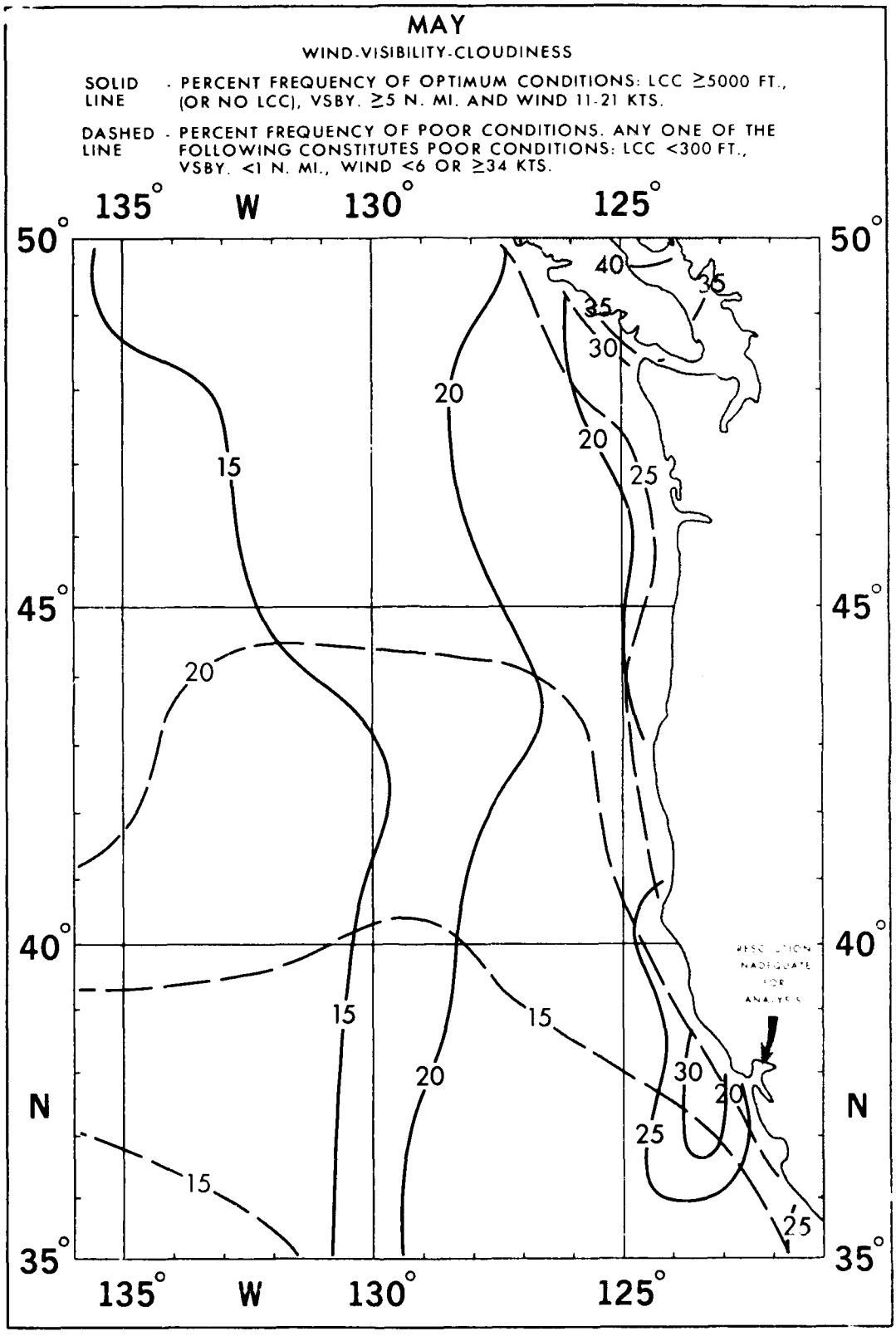

MAY
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
13
12
13
14
12
11
10
9
8
7
6
5
4
3
2
RESOLUTION
INADEQUATE
FOR
ANALYSIS

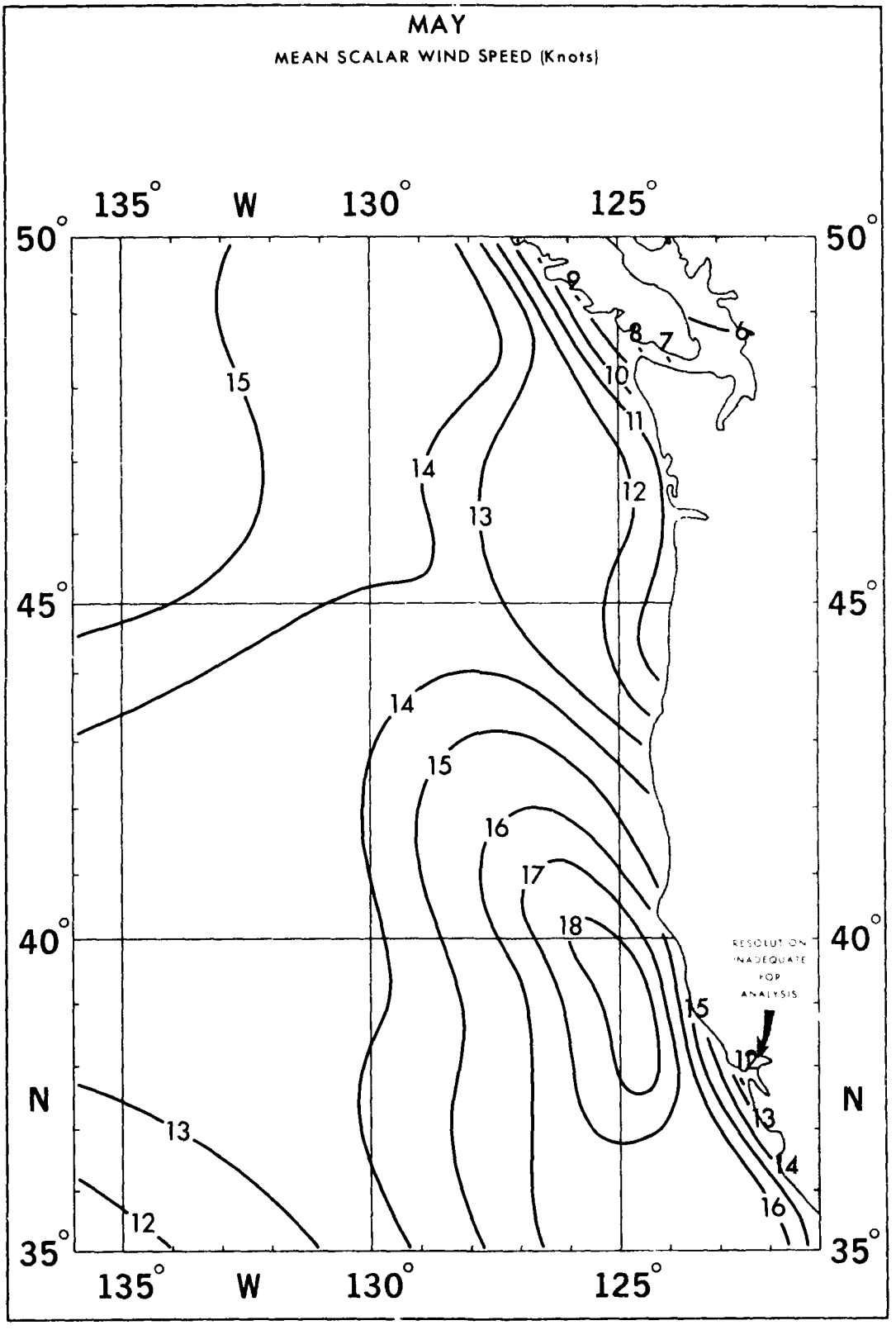

135° W 130° 125°
50°
45°
N
MAY
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N= OBSERVATION COUNT.

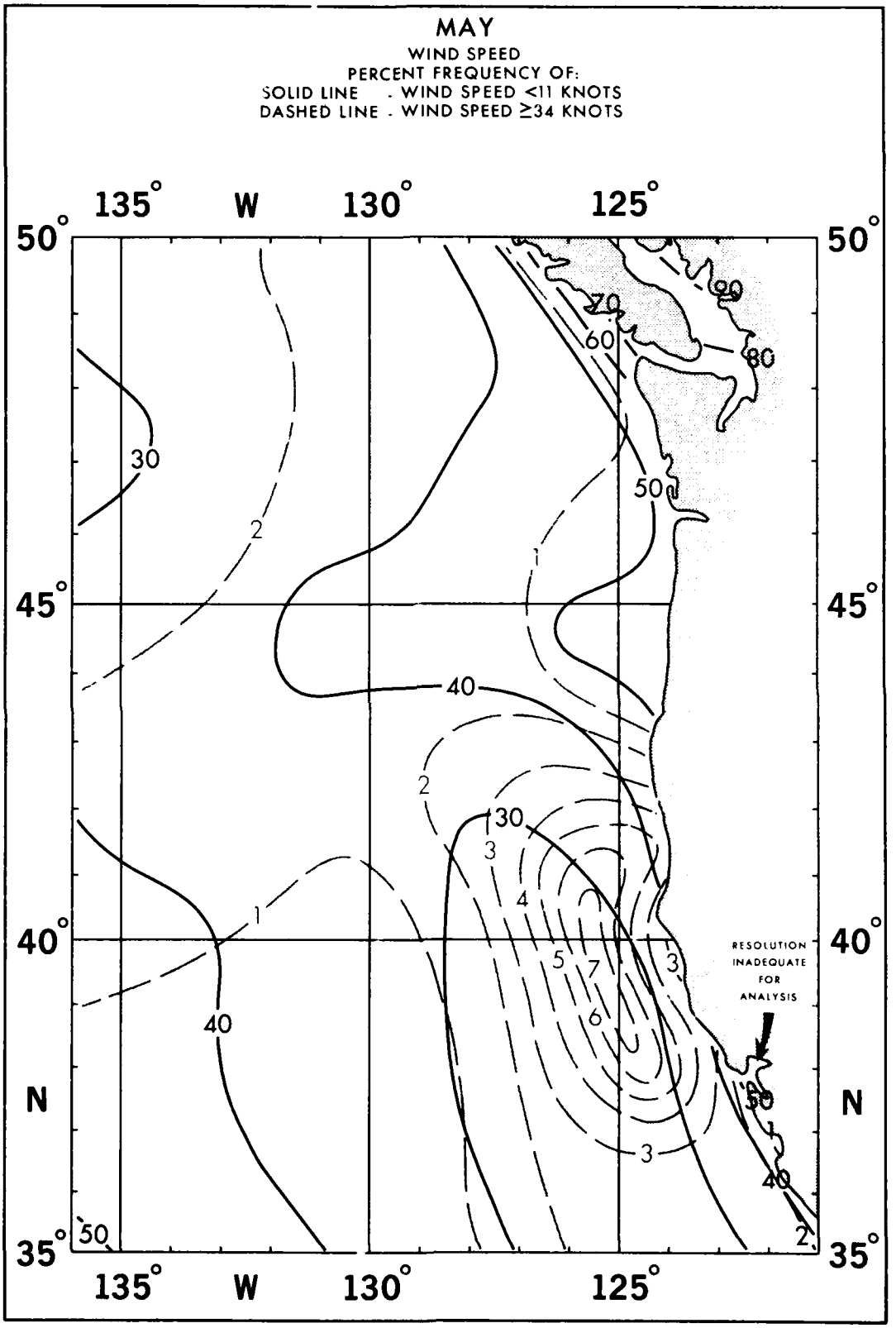

135° W 130° 125°
40°
35°
N
MAY
VISIBILITY
(NAUTICAL MILES)

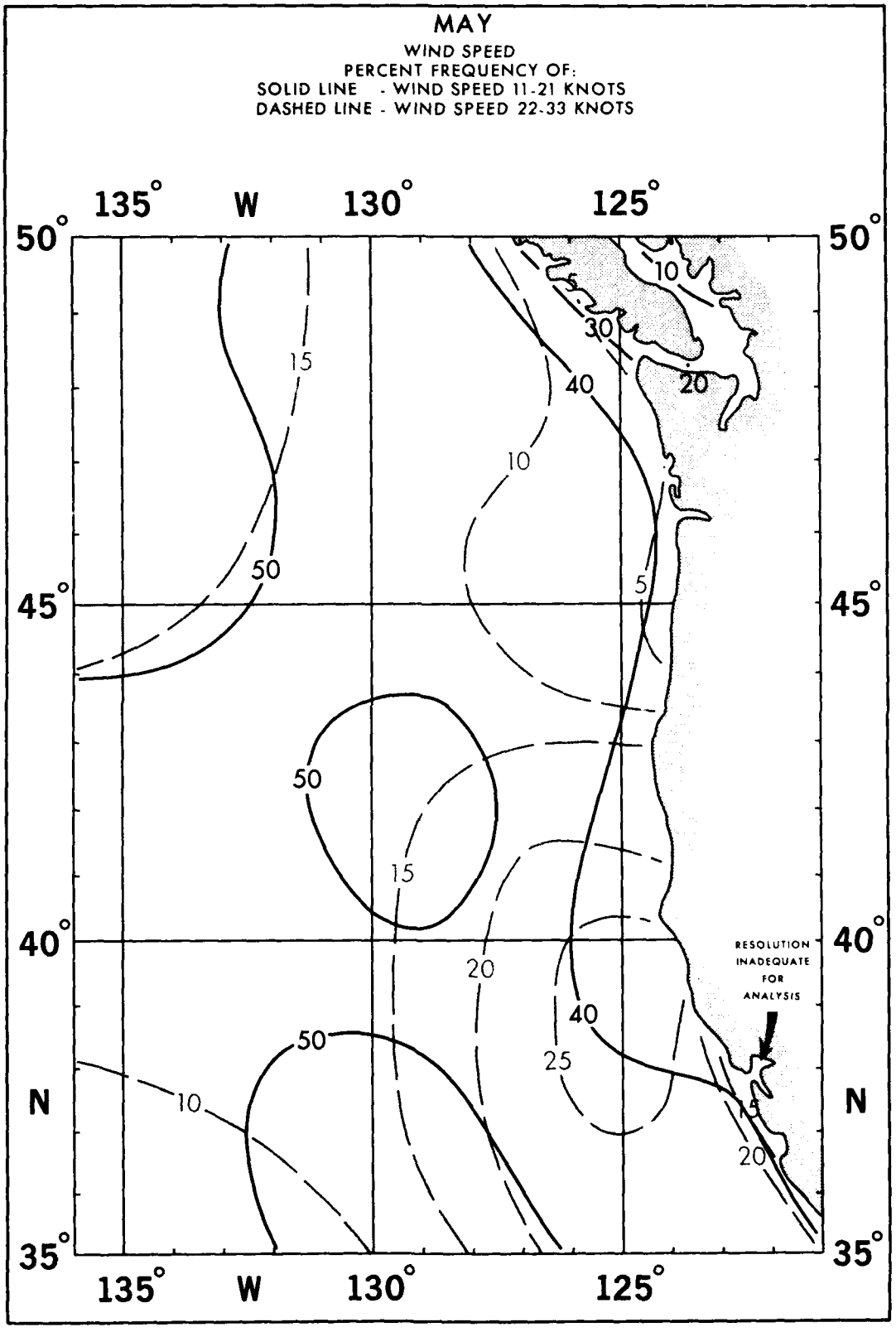

MAY
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

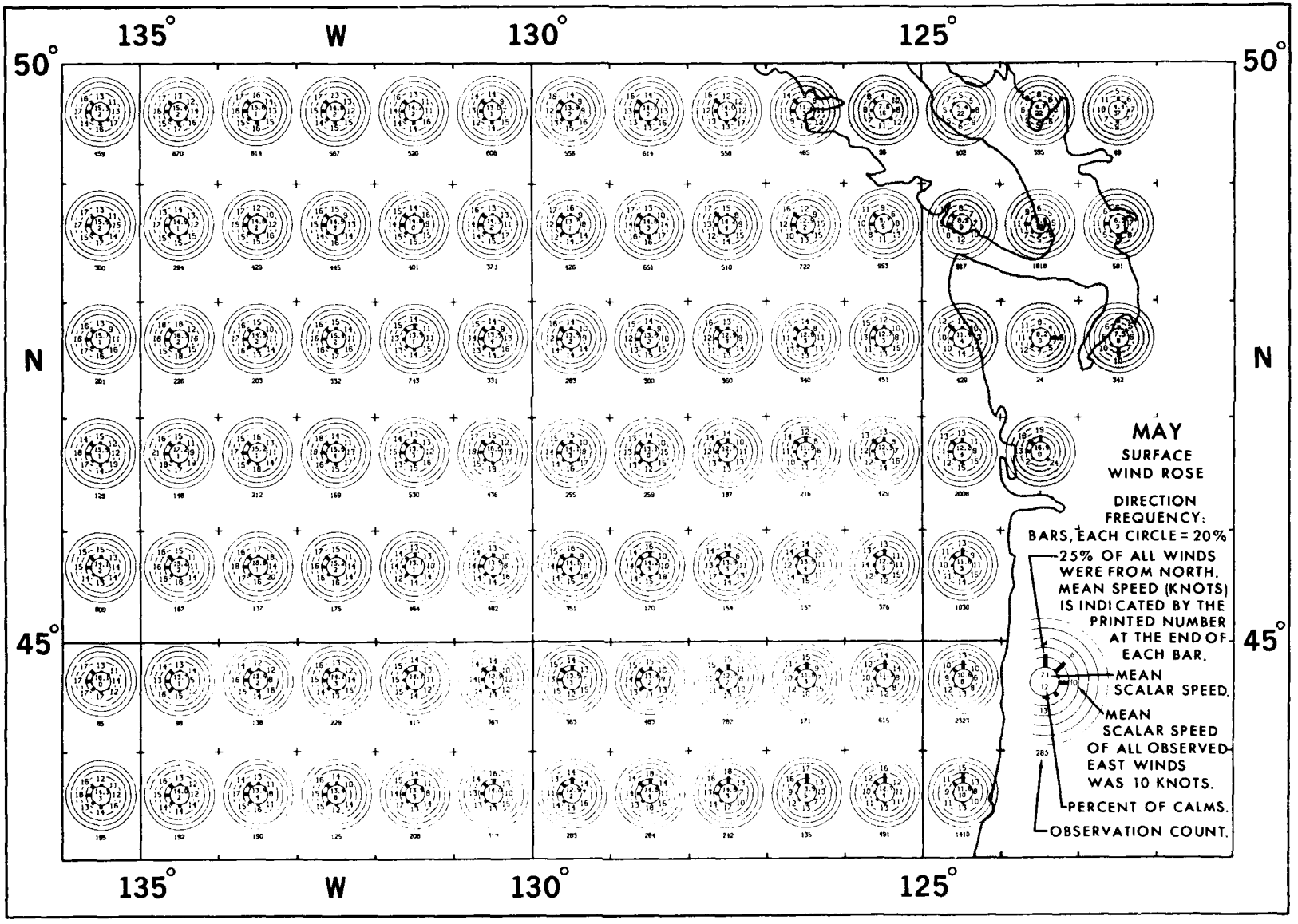

MAY
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

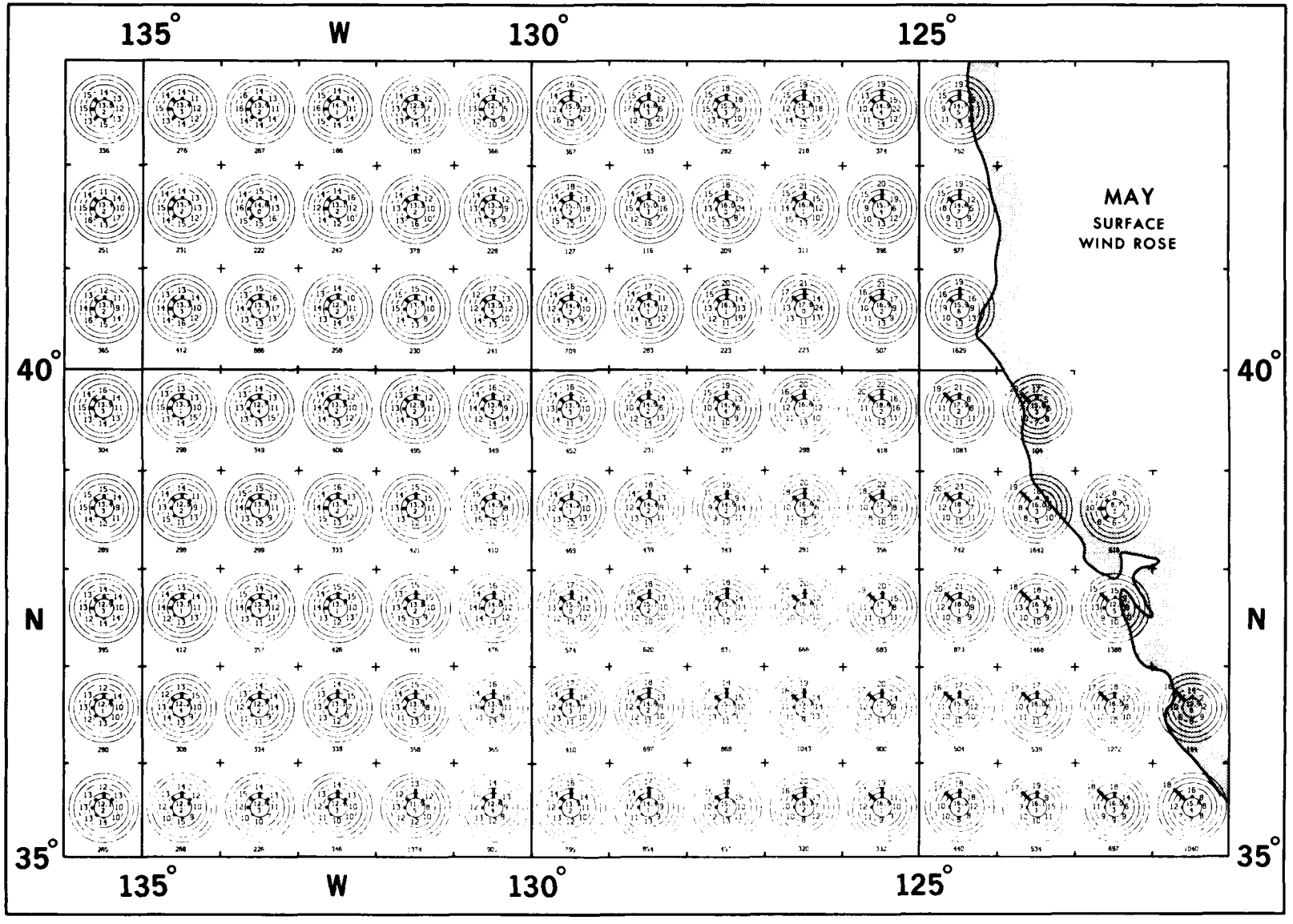

MAY
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
15
20
25
30
35
40
NADEQUATE FOR ANALYSIS

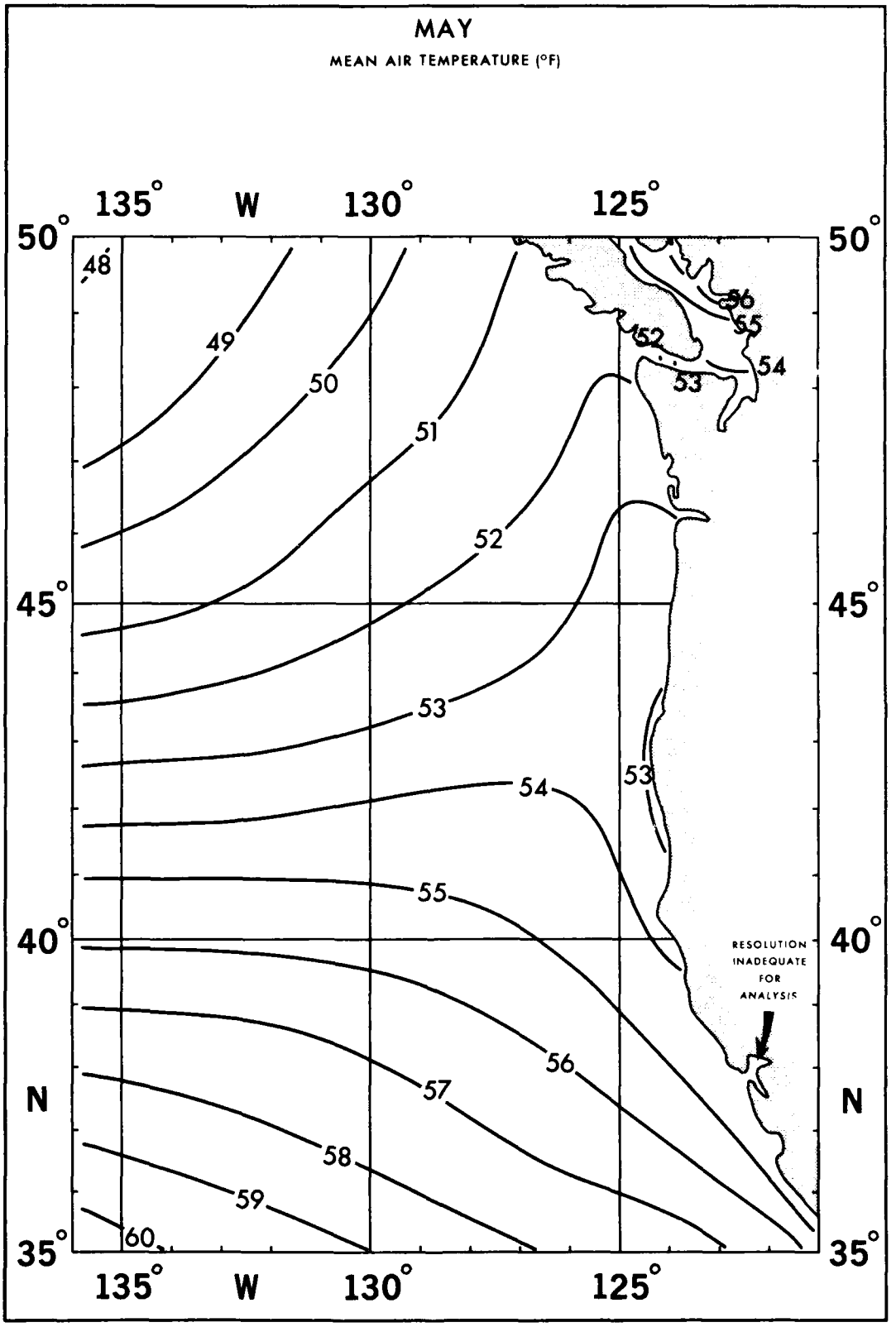

MAY
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
N
35°
15
14
13
12
11
10
9
8
7
6
16
17
18
RESOLUTION INADEQUATE FOR ANALYSIS

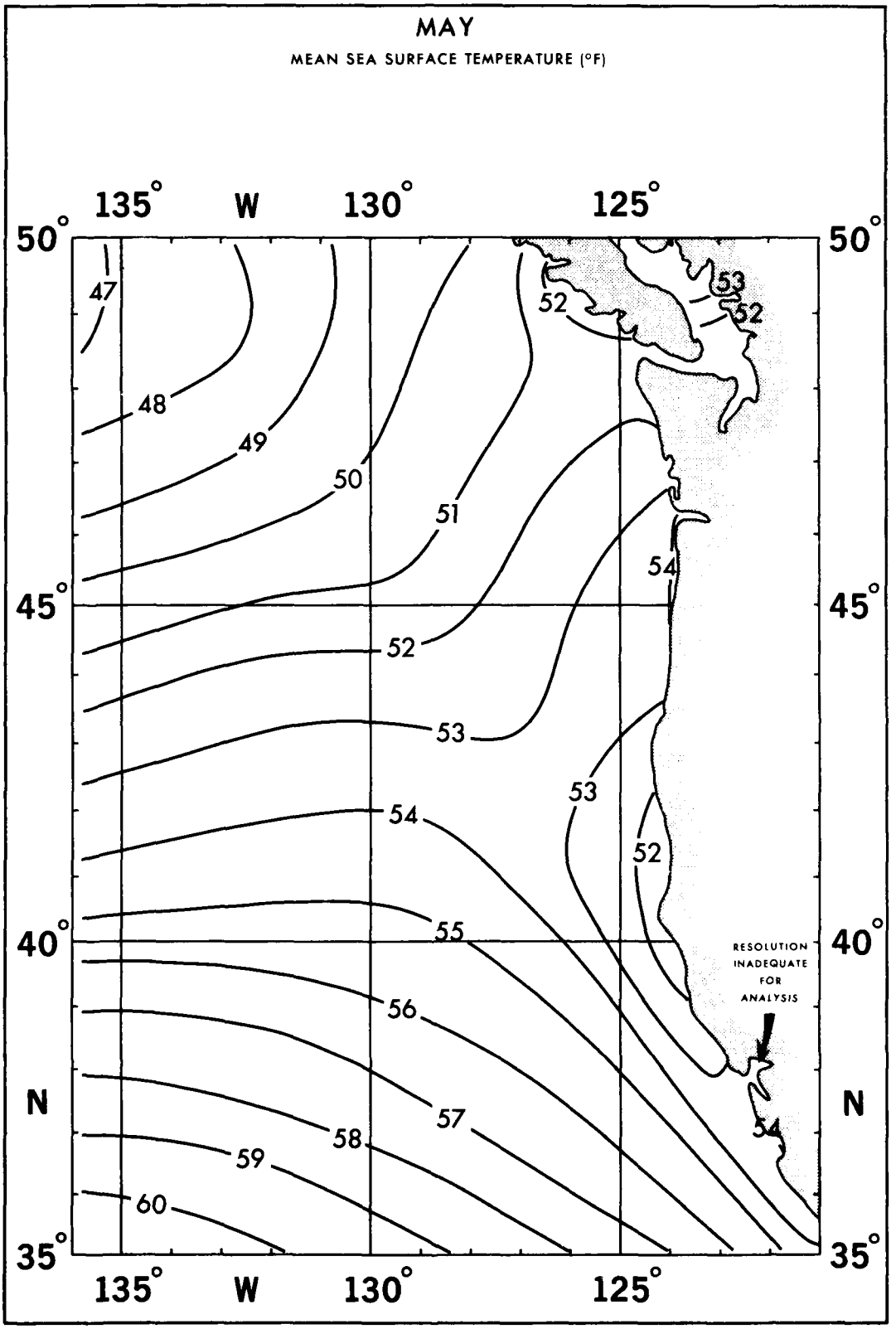

MAY
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

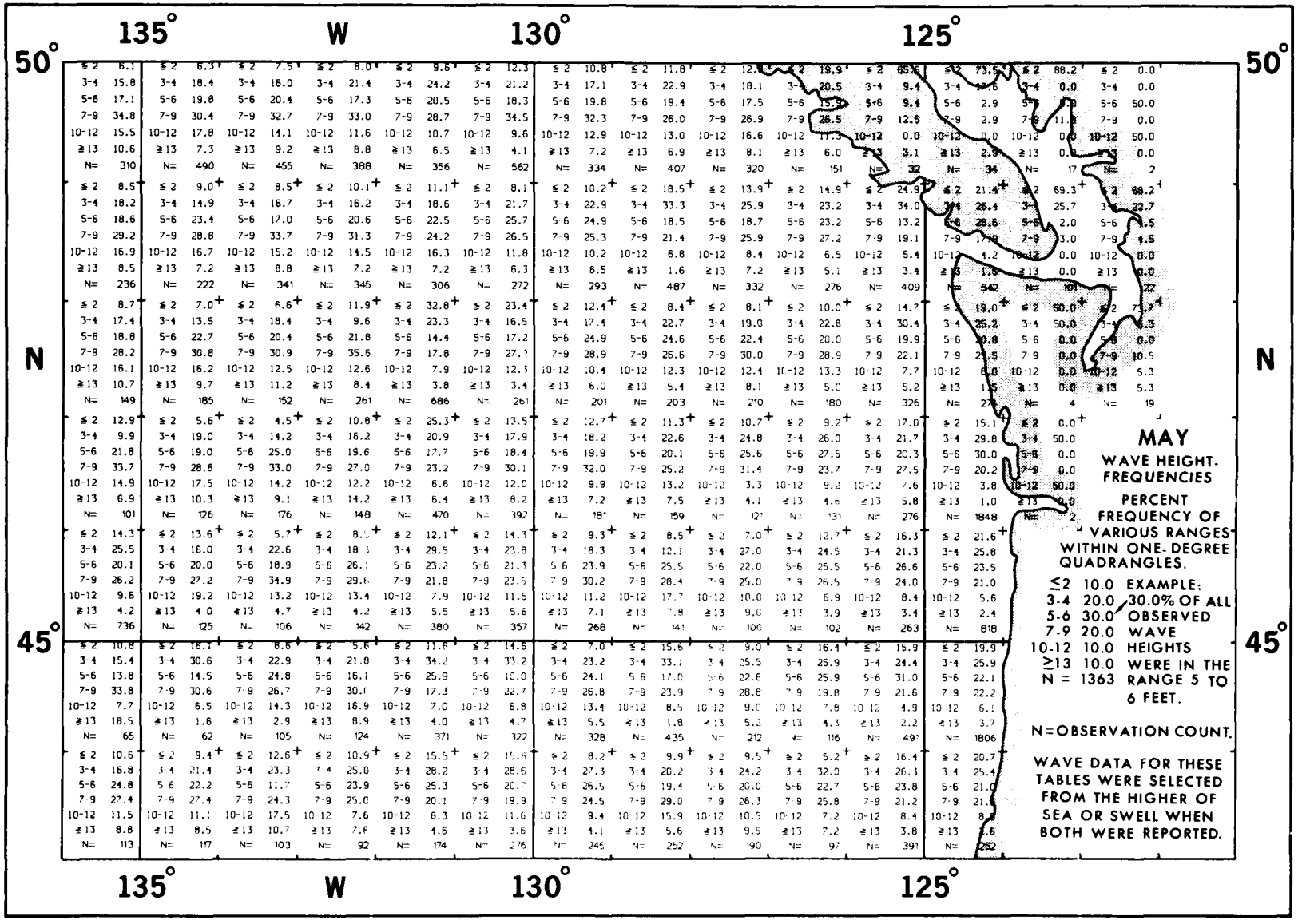

MAY
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
10
30
20
40
15
50
5
25

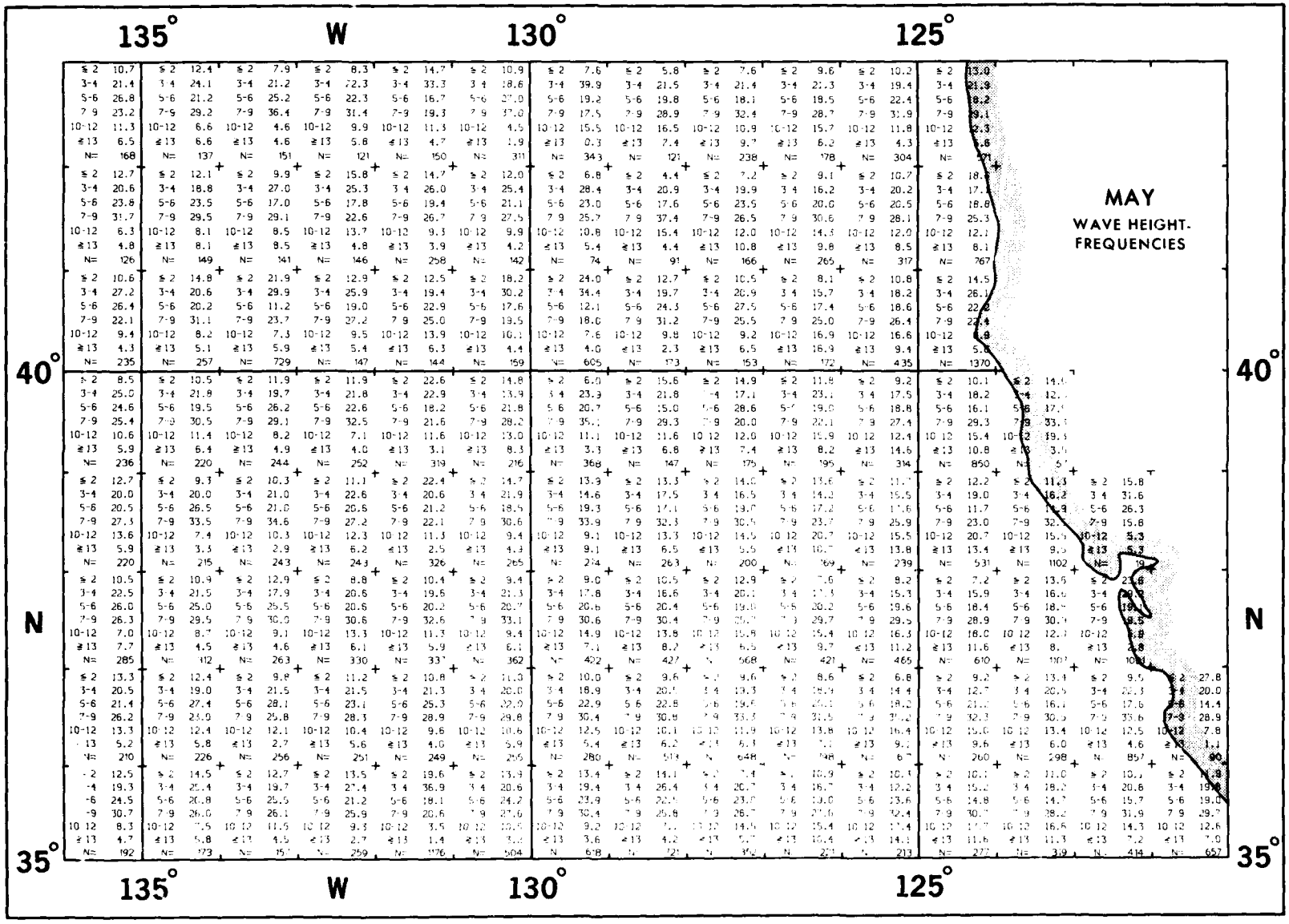

135° W 130° 125°
50°
45°
N
MAY
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS
WERE FROM NORTH.
MEAN SPEED (KNOTS)
IS INDICATED BY THE
PRINTED NUMBER
AT THE END OF
EACH BAR.
MEAN
SCALAR SPEED.
MEAN
SCALAR SPEED
OF ALL OBSERVED
EAST WINDS
WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

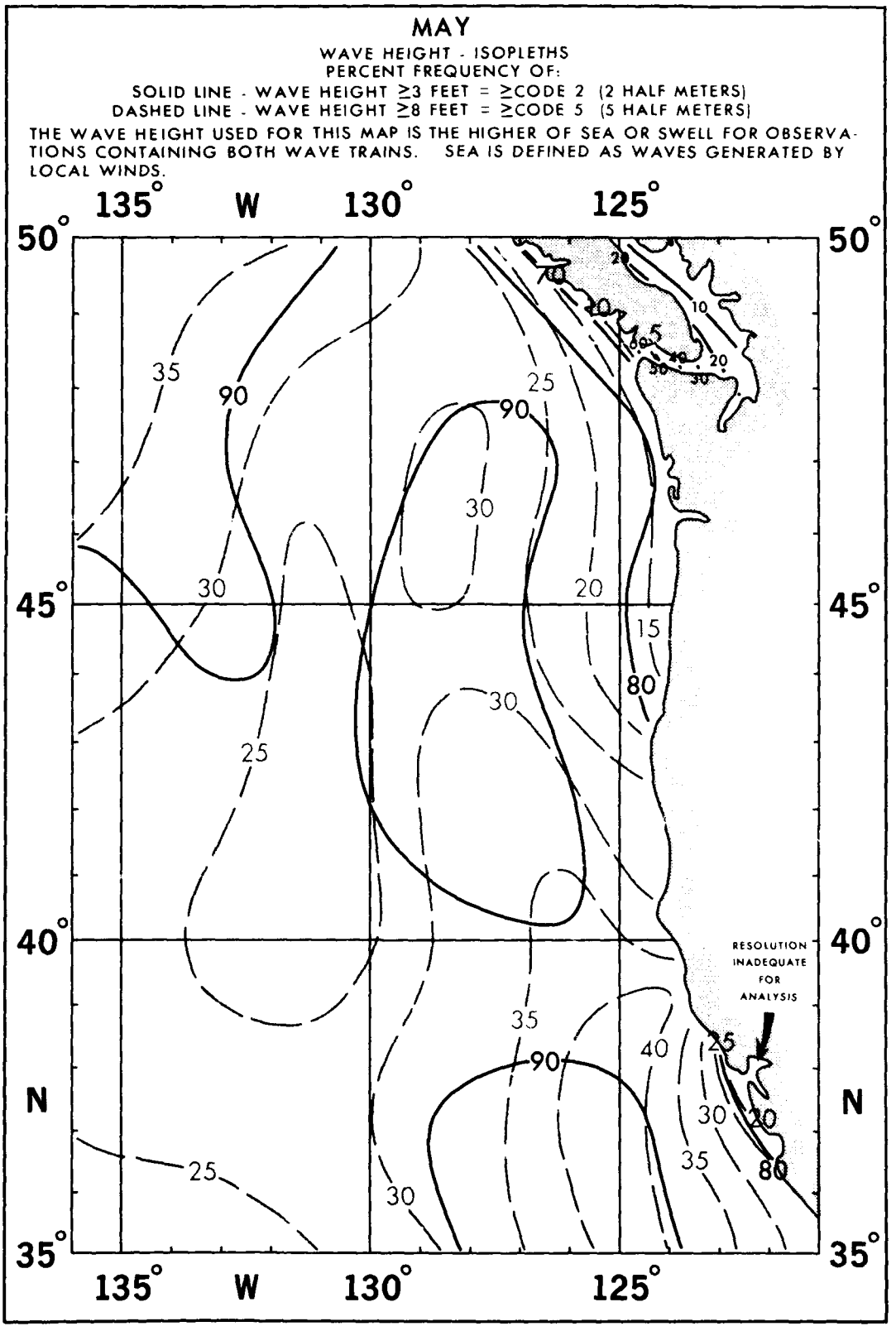

135° W 130° 125°
40°
N
35°
MAY
SURFACE
WIND ROSE

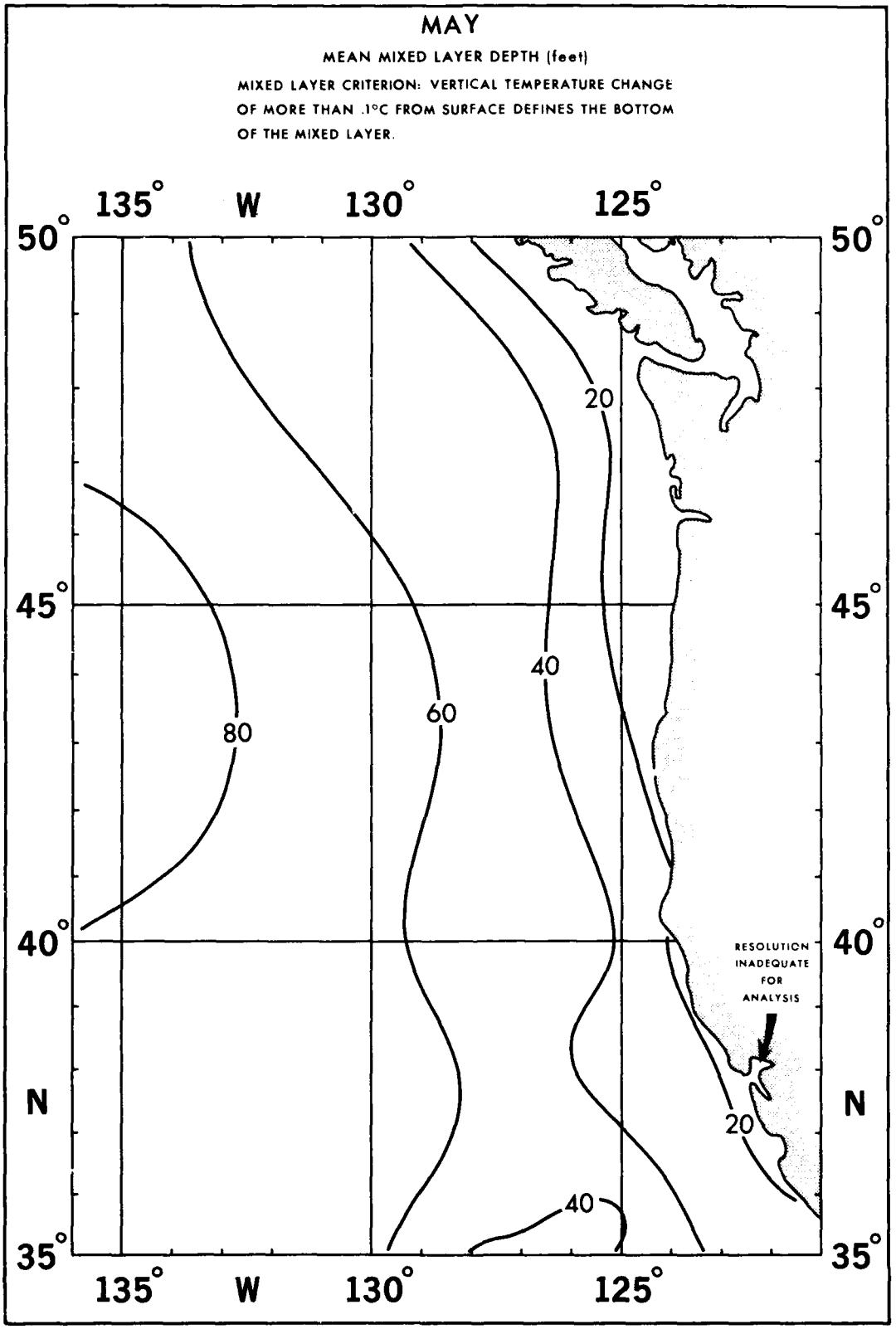

MAY
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
48
49
50
51
52
53
54
55
56
57
58
59
60
RESOLUTION INADEQUATE FOR ANALYSIS

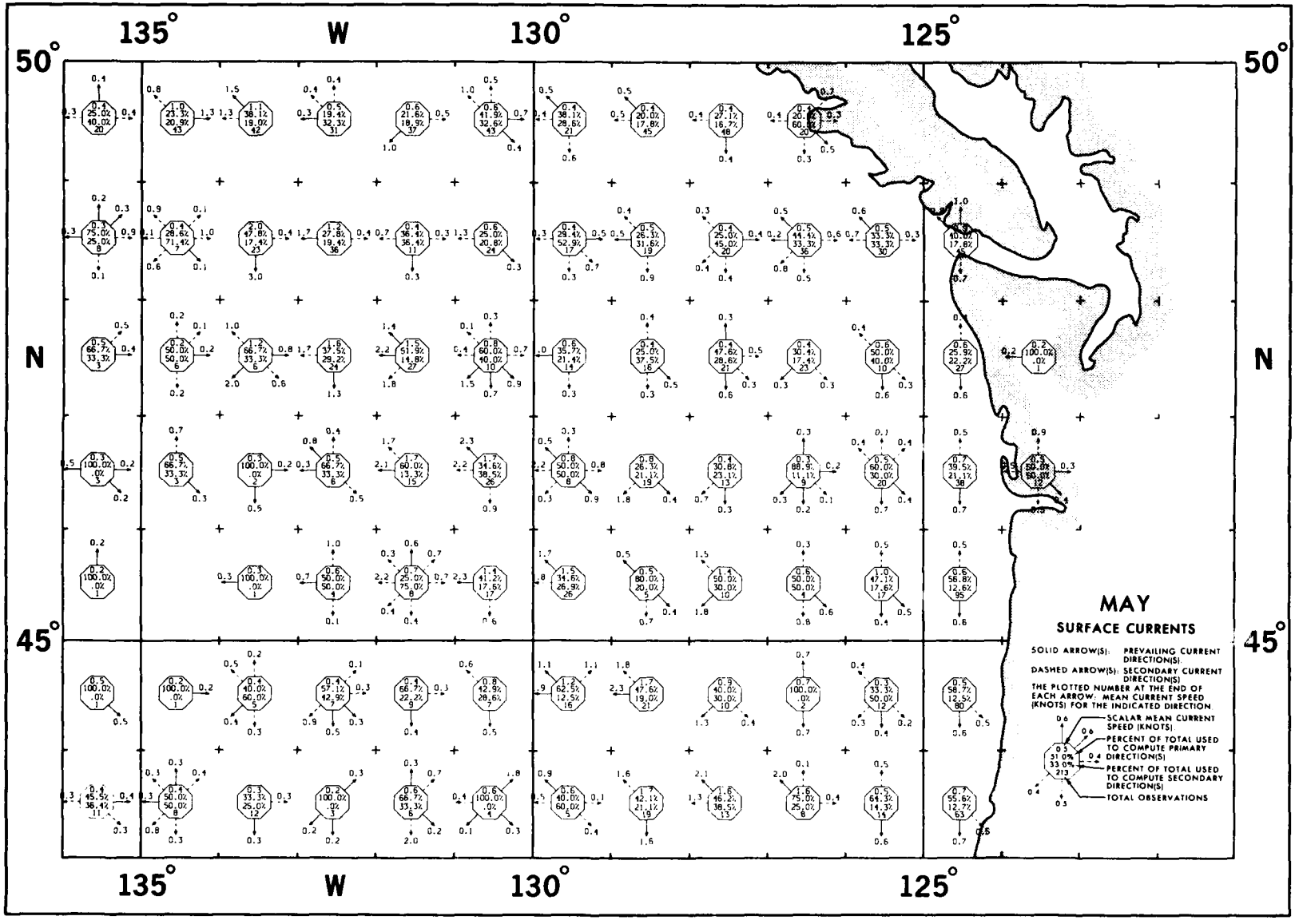

MAY
MEAN SEA SURFACE TEMPERATURE (°F)
135° W
130°
125°
50°
45°
40°
35°
N
47
48
49
50
51
52
53
54
55
56
57
58
59
60
RESOLUTION INADEQUATE FOR ANALYSIS

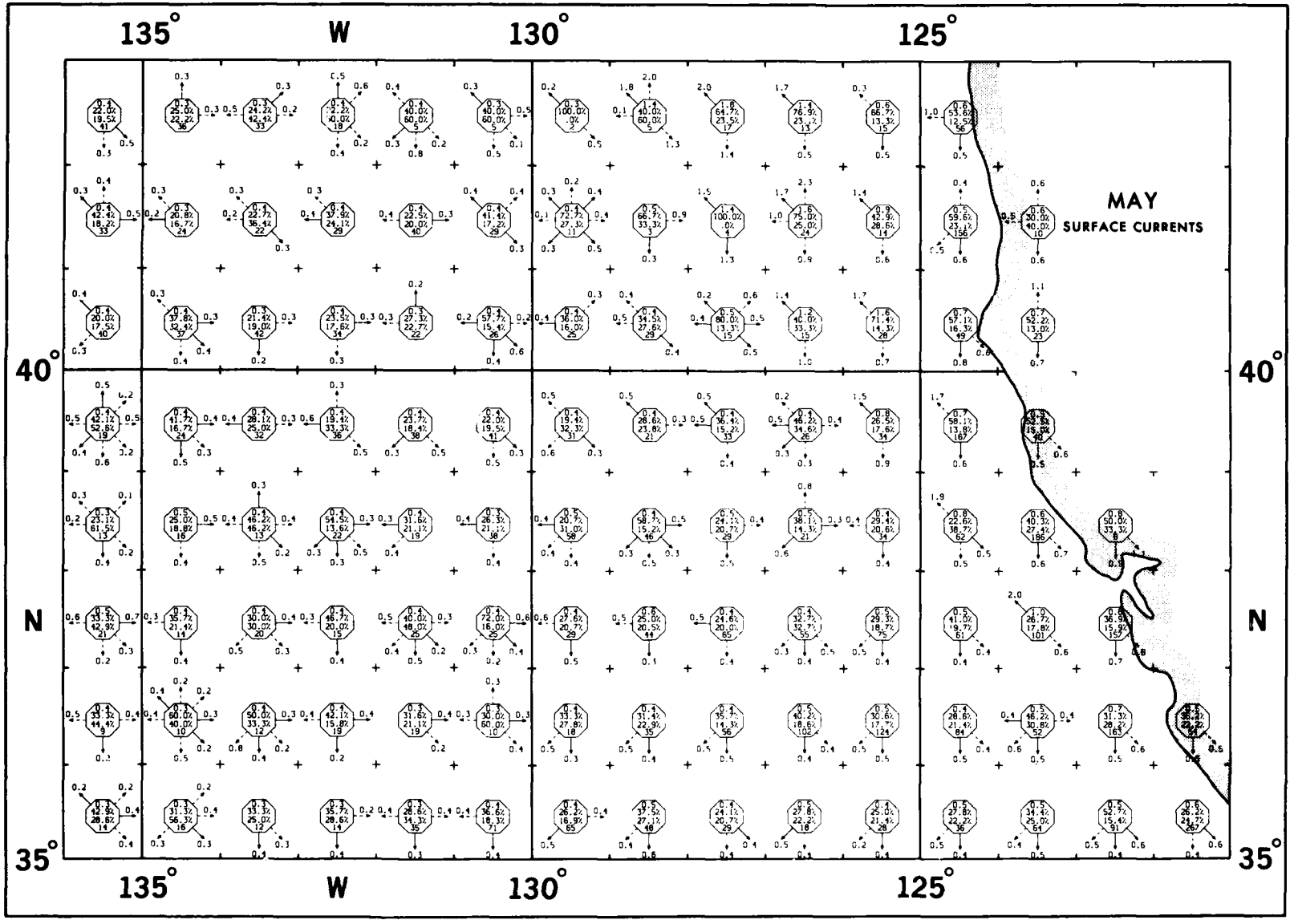

135° W 130° 125°
50°
45°
N
MAY
WAVE HEIGHT. FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

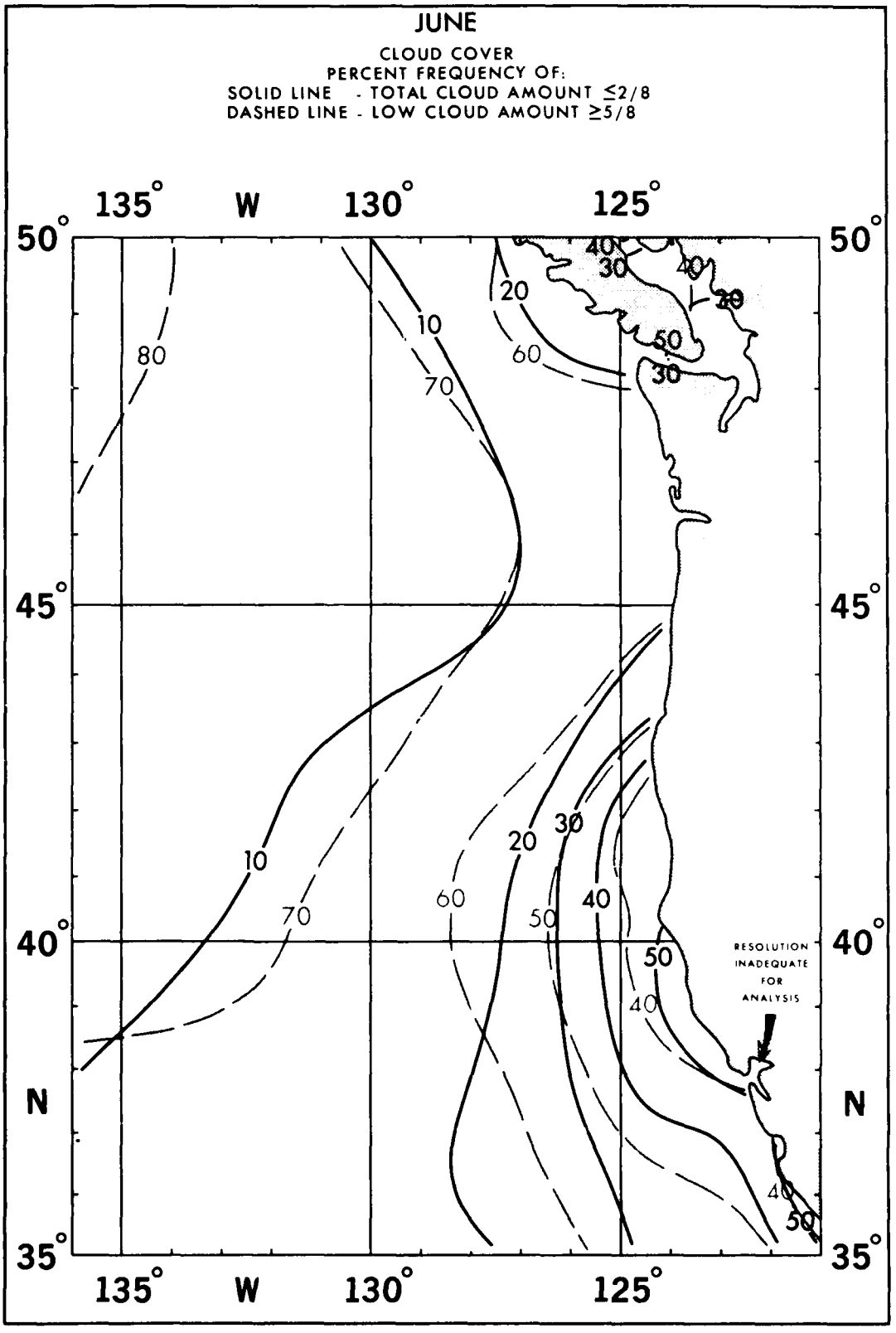

135° W 130° 125°
40° N 35°
MAY
WAVE HEIGHT-
FREQUENCIES

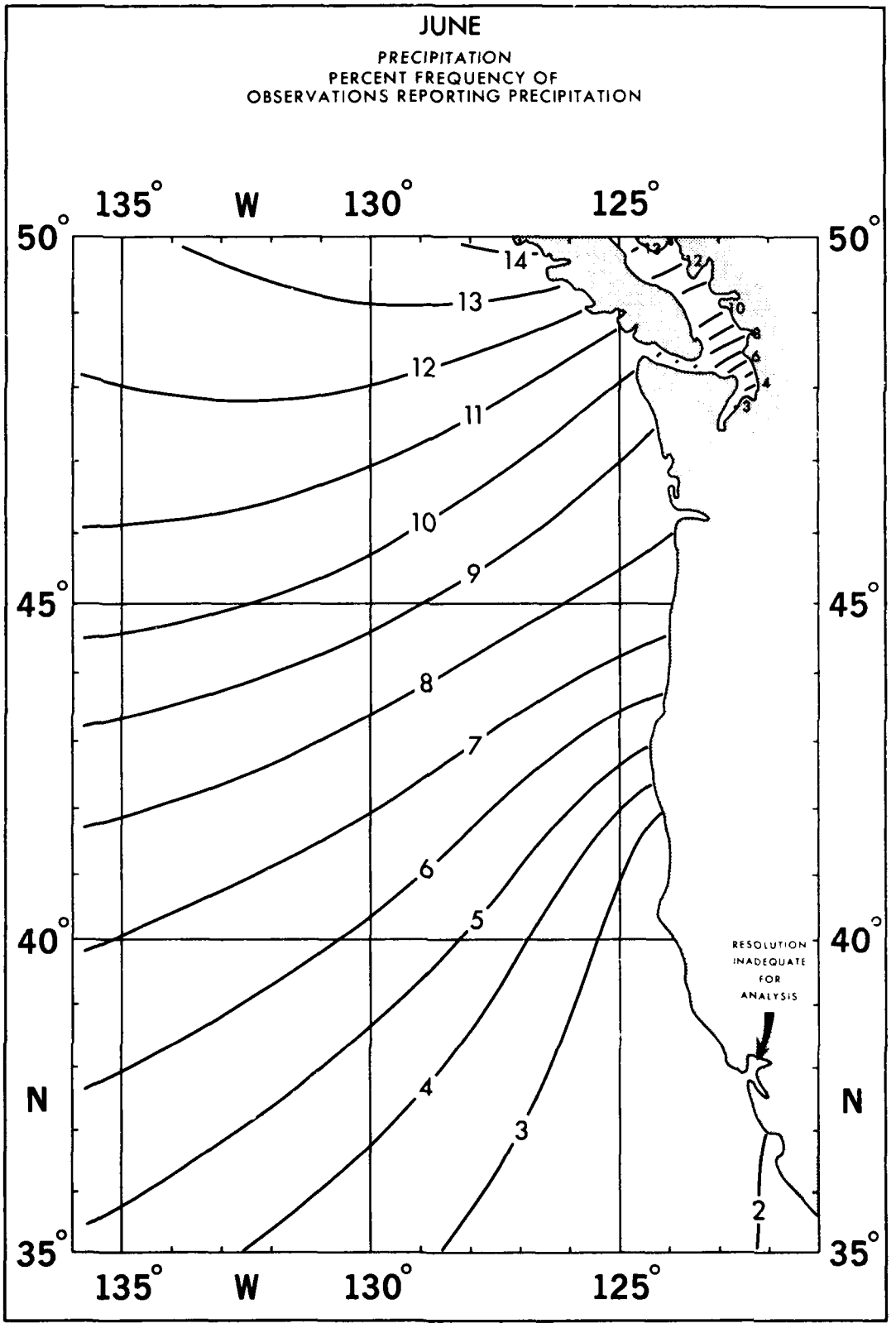

MAY
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

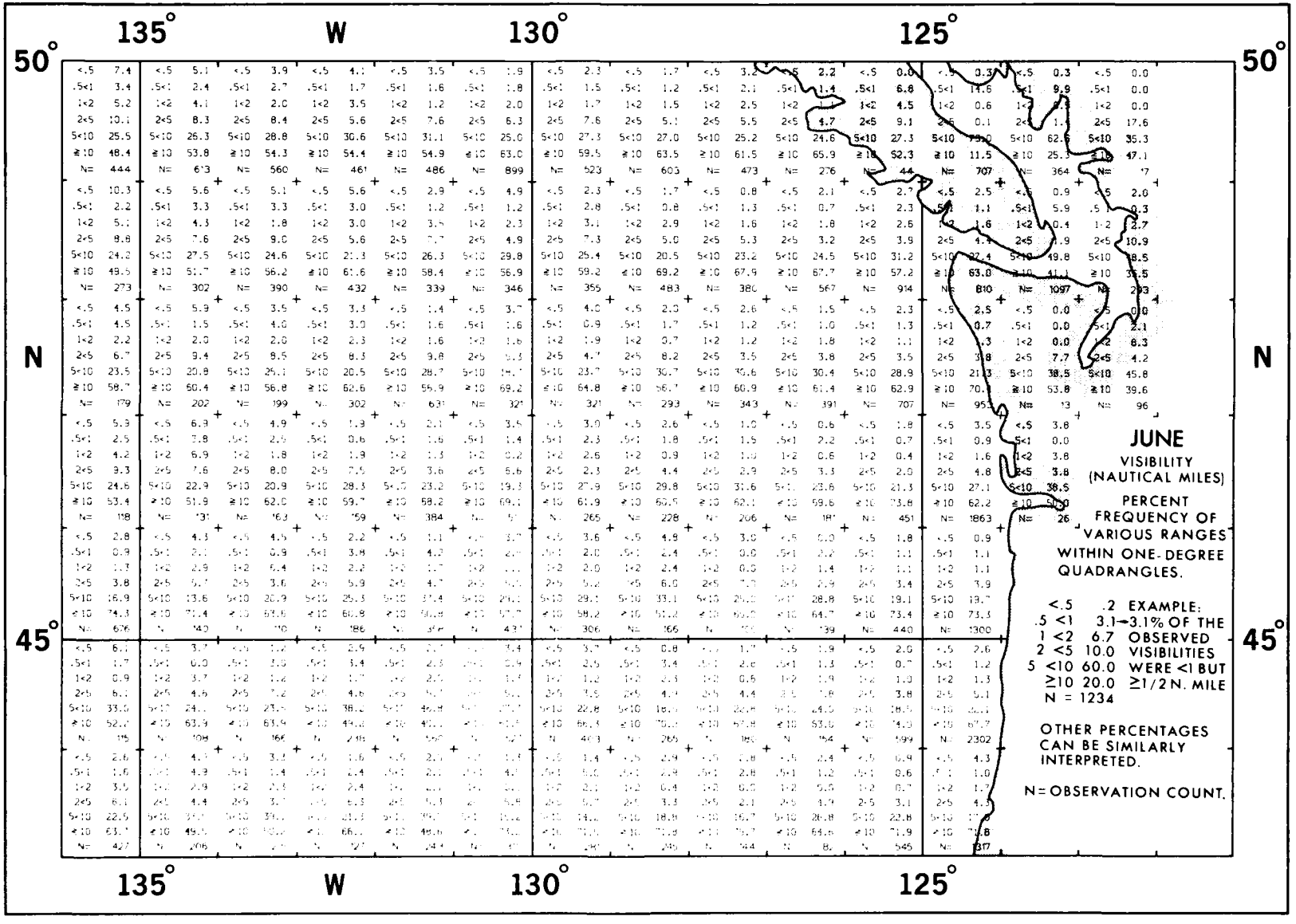

MAY
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W
130°
125°
50°
45°
40°
35°
N
80
60
40
20
20
40
RESOLUTION INADEQUATE FOR ANALYSIS

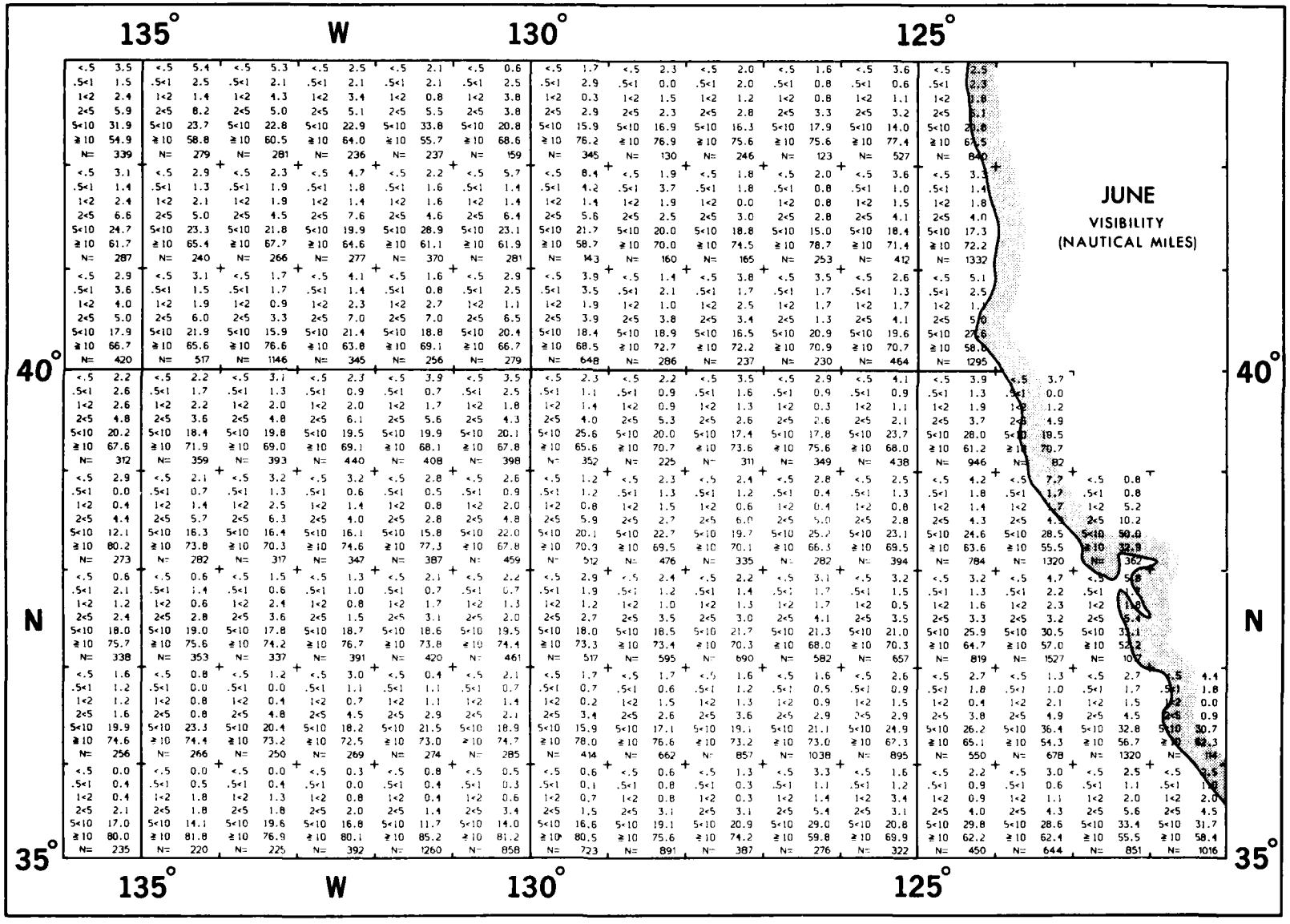

135° W 130° 125°
50°
45°
N
MAY
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S).
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S).
THE PLOTTED NUMBER AT THE END OF EACH ARROW: MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION.
SCALAR MEAN CURRENT SPEED (KNOTS).
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S).
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S).
TOTAL OBSERVATIONS

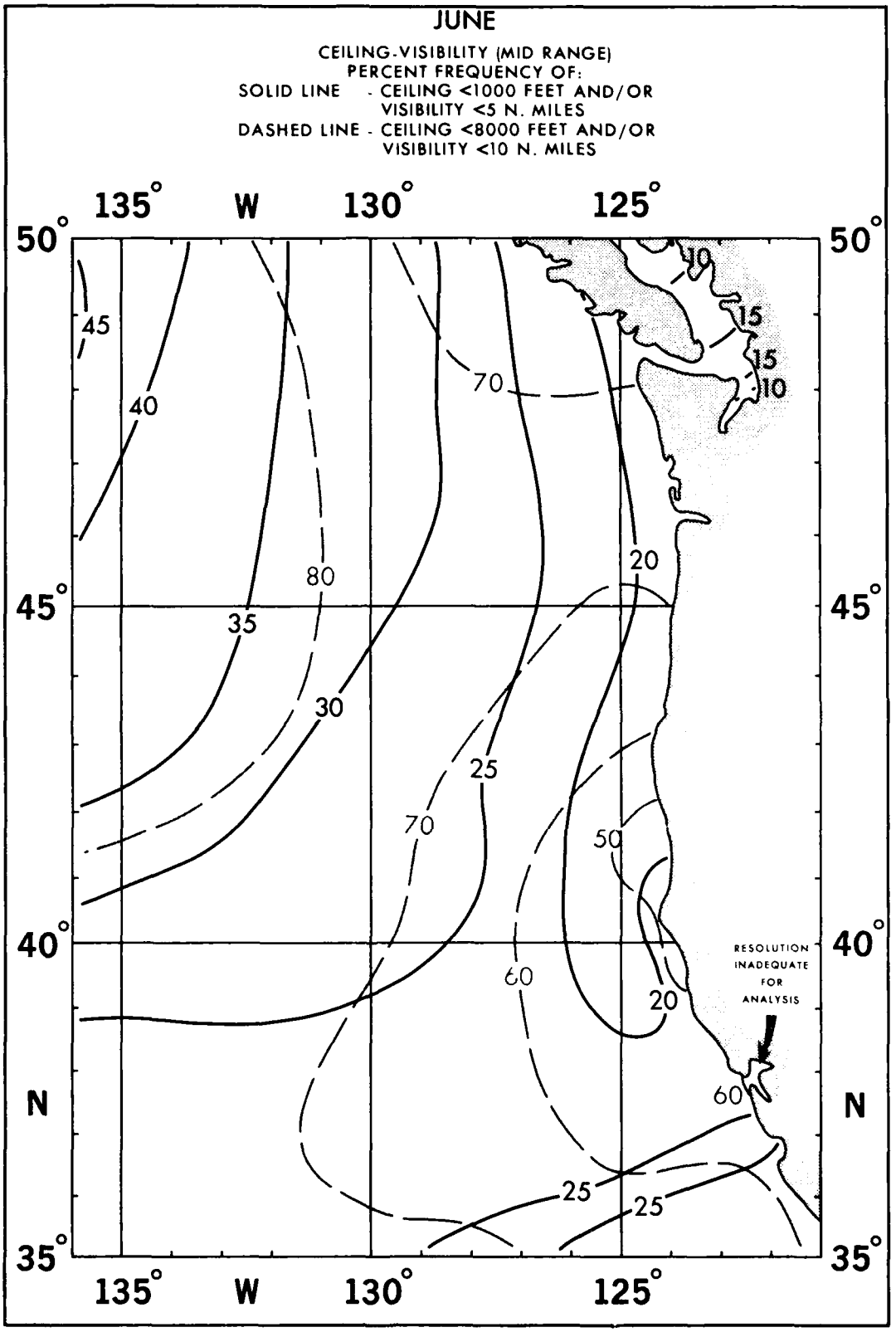

135° W 130° 125°
40°
N
35°
MAY
SURFACE CURRENTS

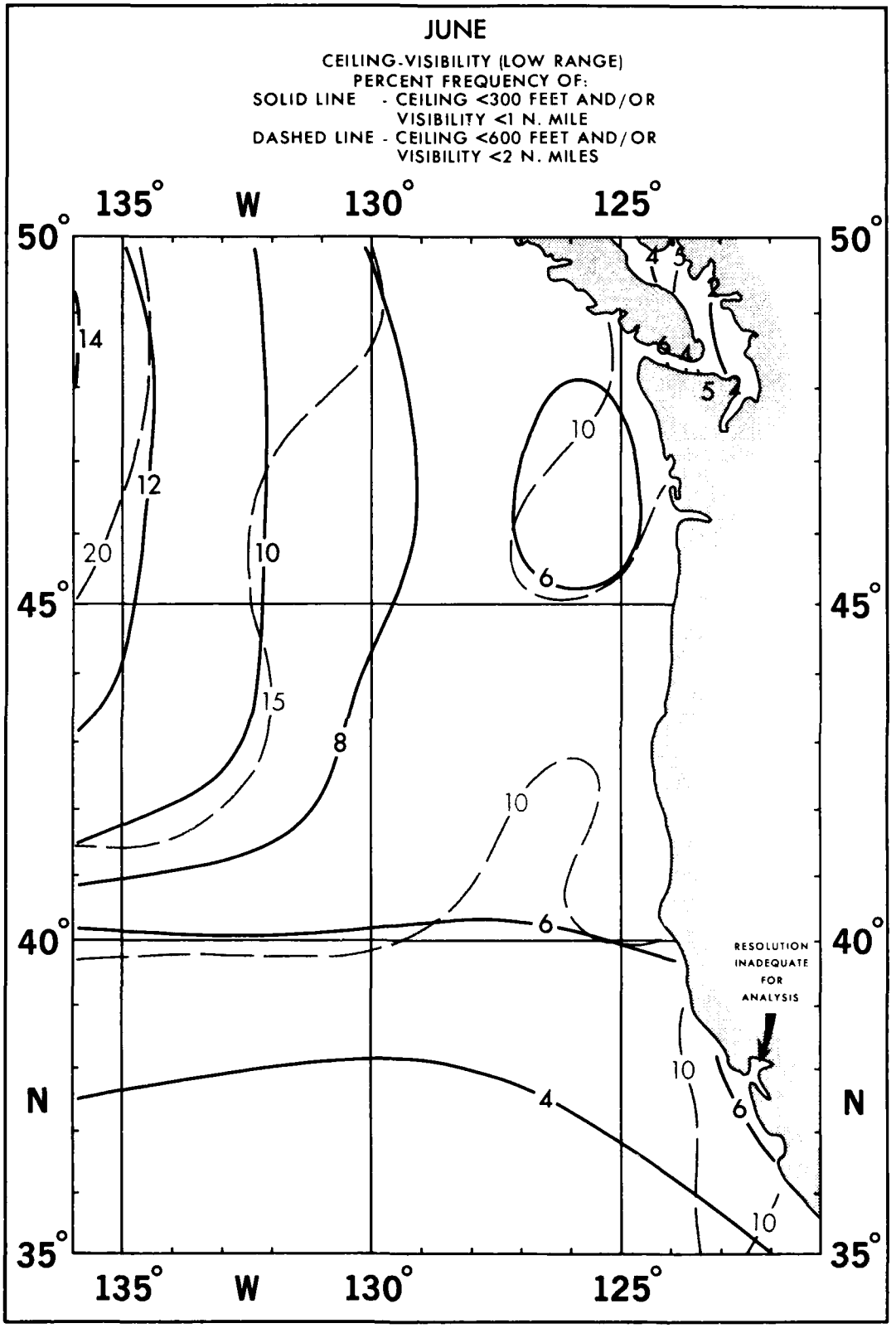

JUNE
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
80
10
70
20
60
30
40
50
RESOLUTION INADEQUATE FOR ANALYSIS

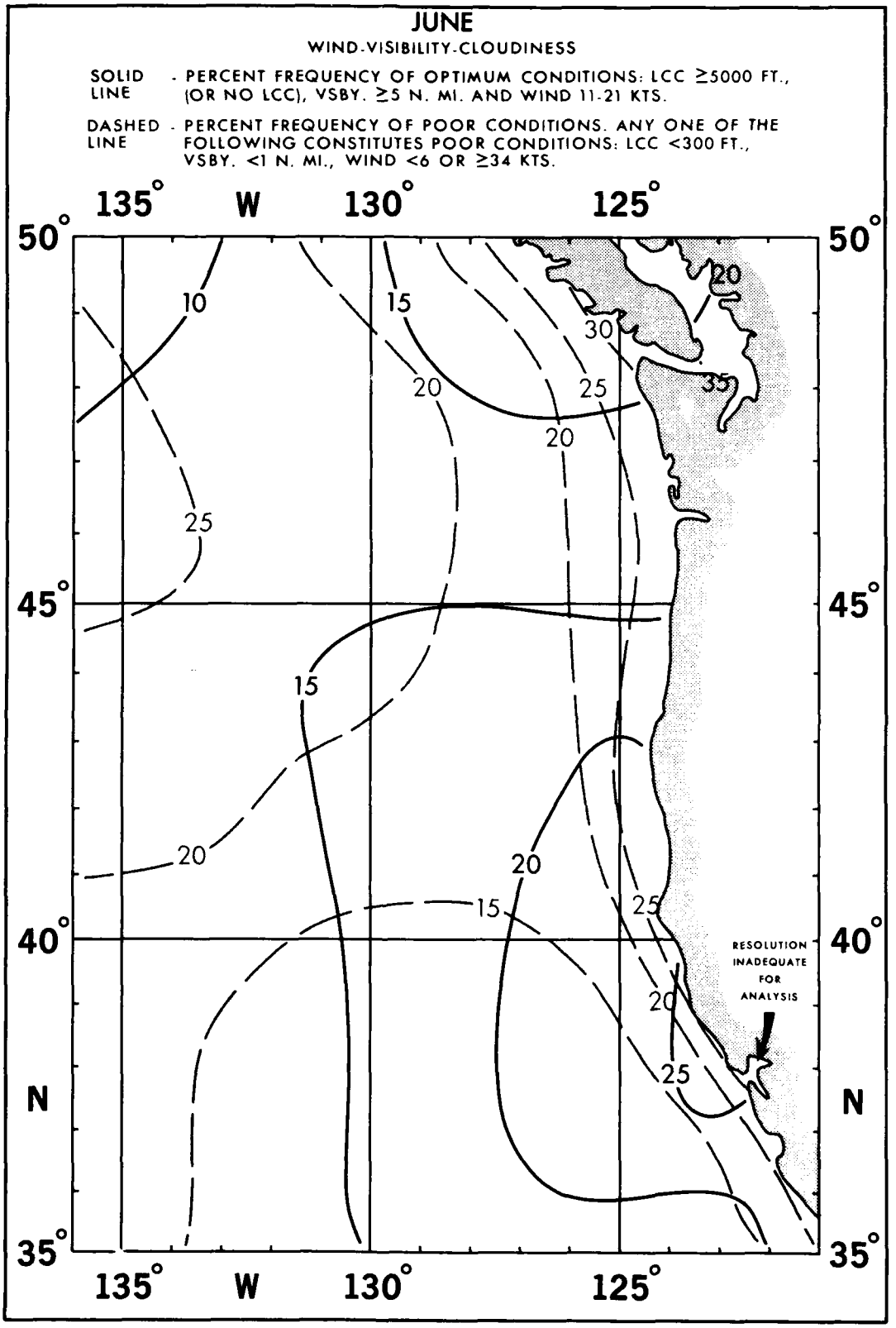

JUNE
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
14
13
12
11
10
9
8
7
6
5
4
3
2
RESOLUTION INADEQUATE FOR ANALYSIS

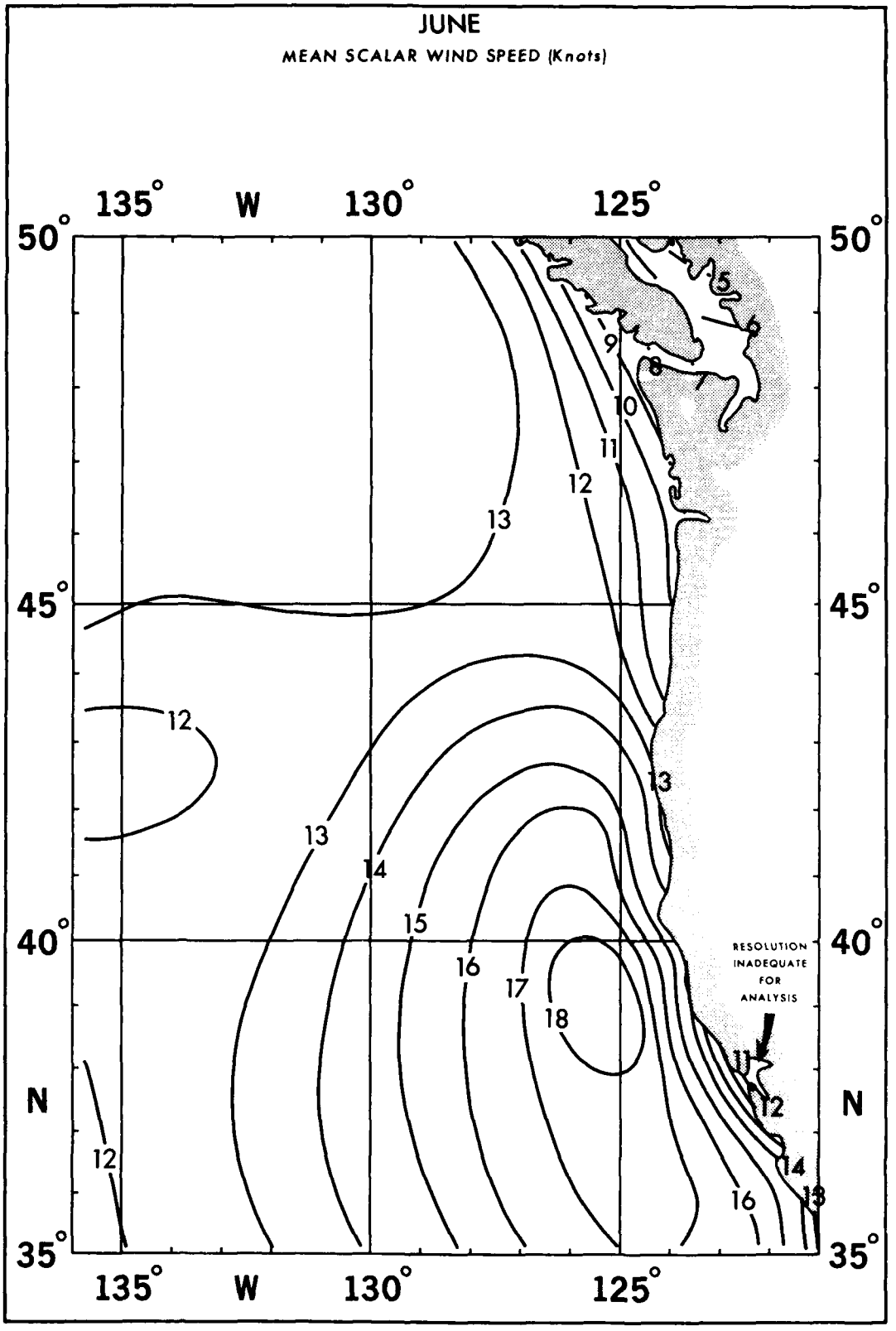

135° W 130° 125°
50°
45°
N
JUNE
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1 3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N= OBSERVATION COUNT.

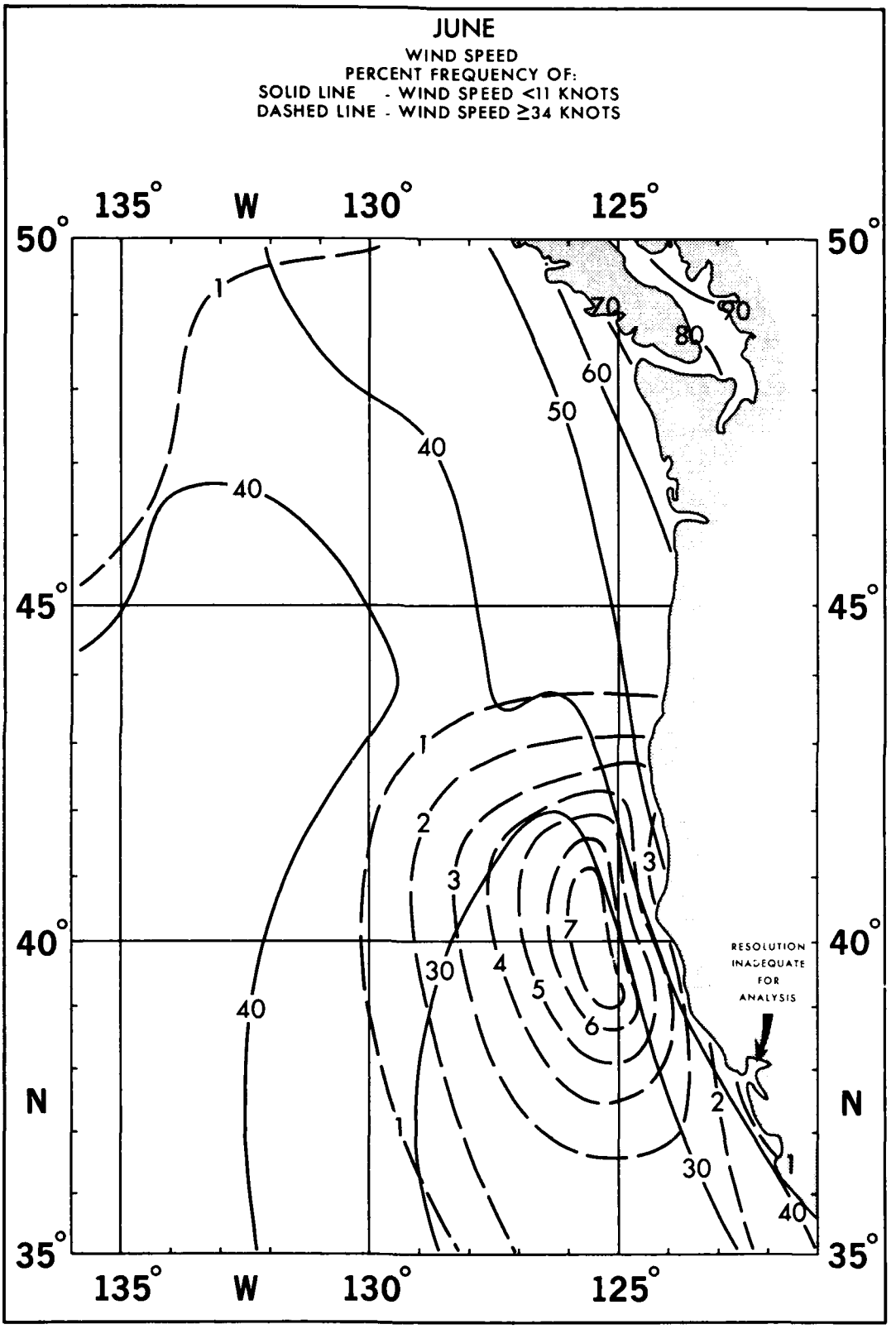

135° W 130° 125°
40°
35°
N
JUNE
VISIBILITY
(NAUTICAL MILES)

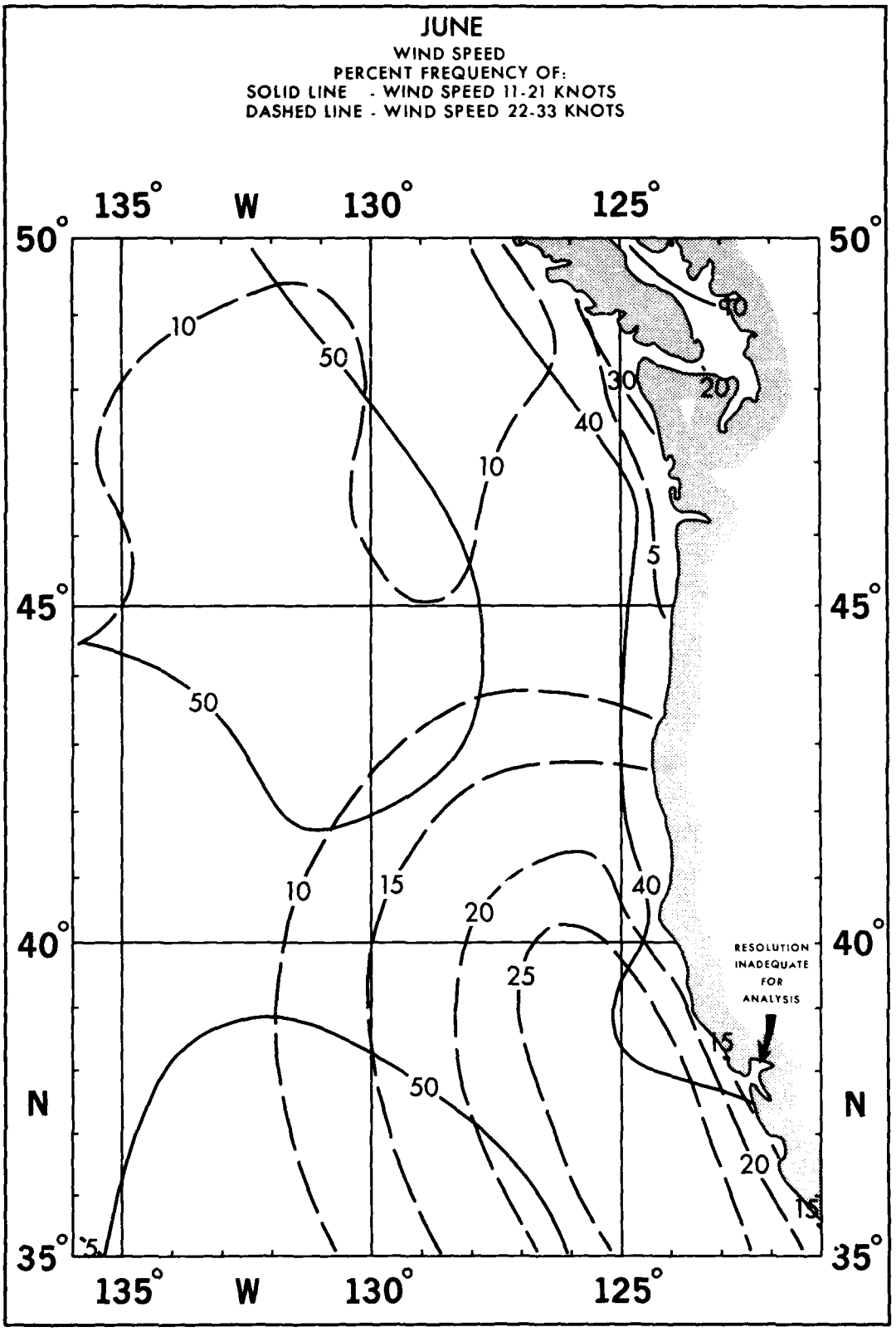

JUNE
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
45
40
35
30
25
20
80
70
50
60
10
15
15
10
20
25
25
RESOLUTION INADEQUATE FOR ANALYSIS

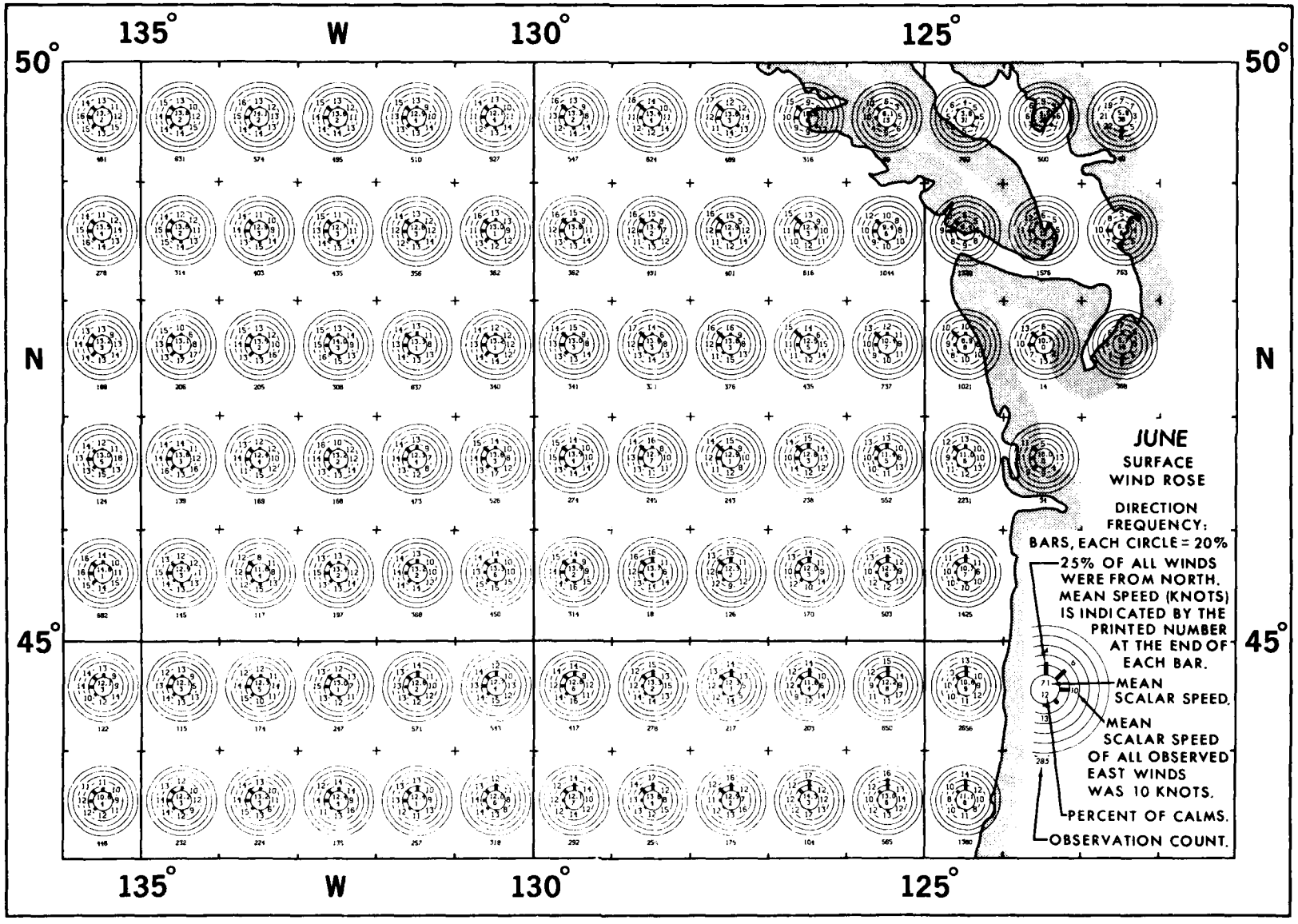

JUNE
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
N
35°
14
12
20
10
15
8
10
6
10
6
4
10
6
10
5
4
3
2
RESOLUTION INADEQUATE FOR ANALYSIS

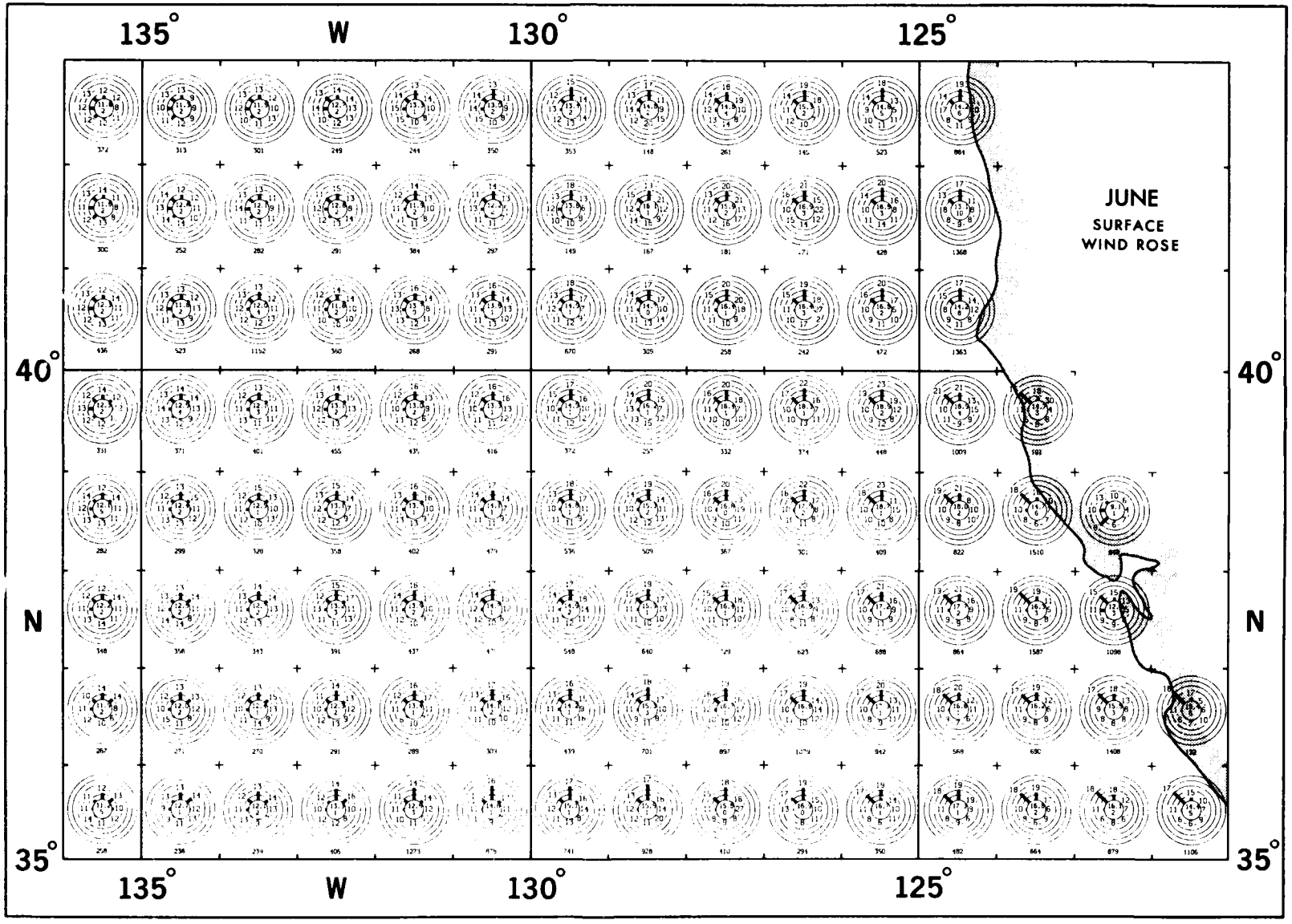

JUNE
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
10
15
20
25
30
35
RESOLUTION INADEQUATE FOR ANALYSIS

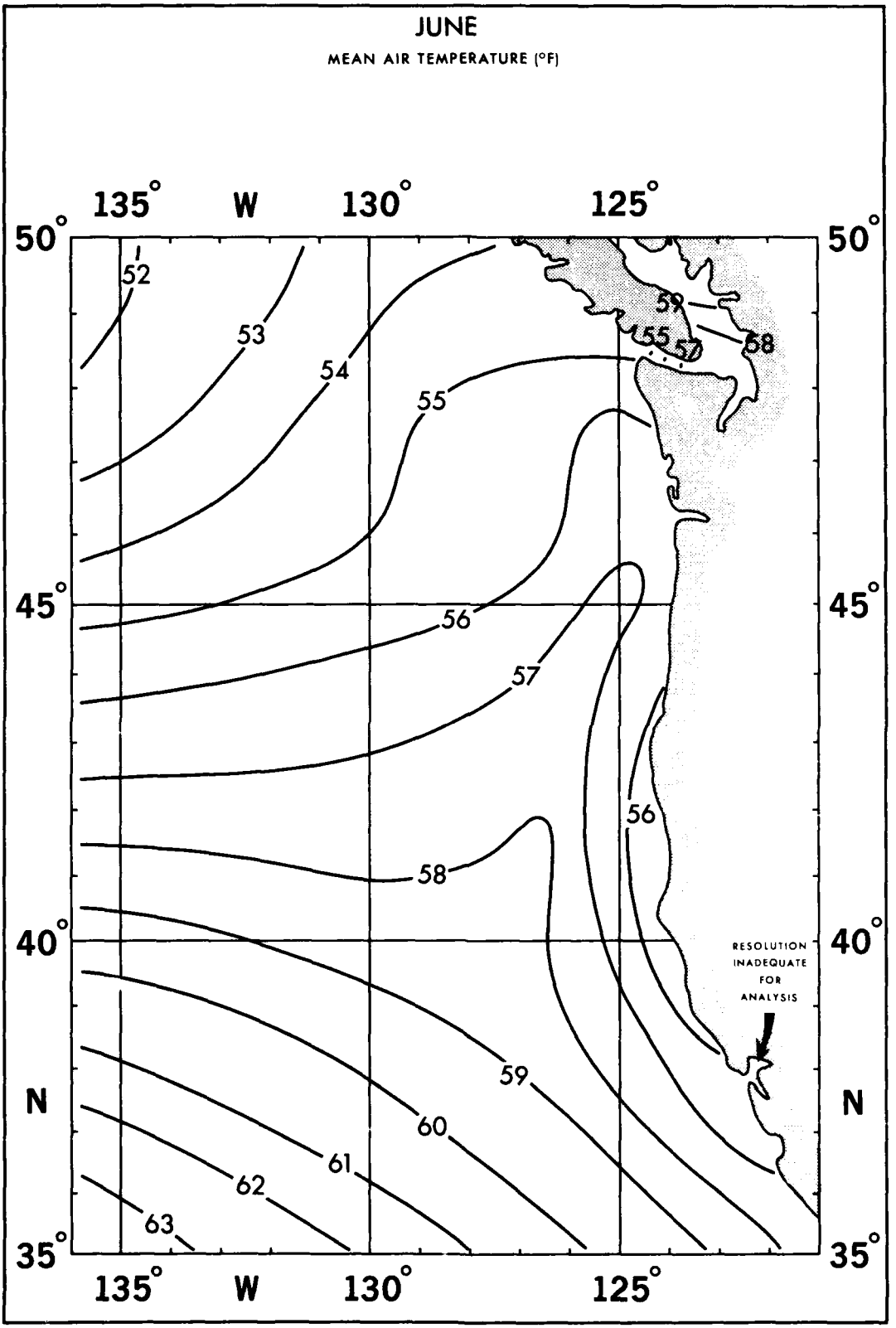

JUNE
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
35°
N
5
6
7
8
9
10
11
12
13
14
15
16
17
18
RESOLUTION INADEQUATE FOR ANALYSIS

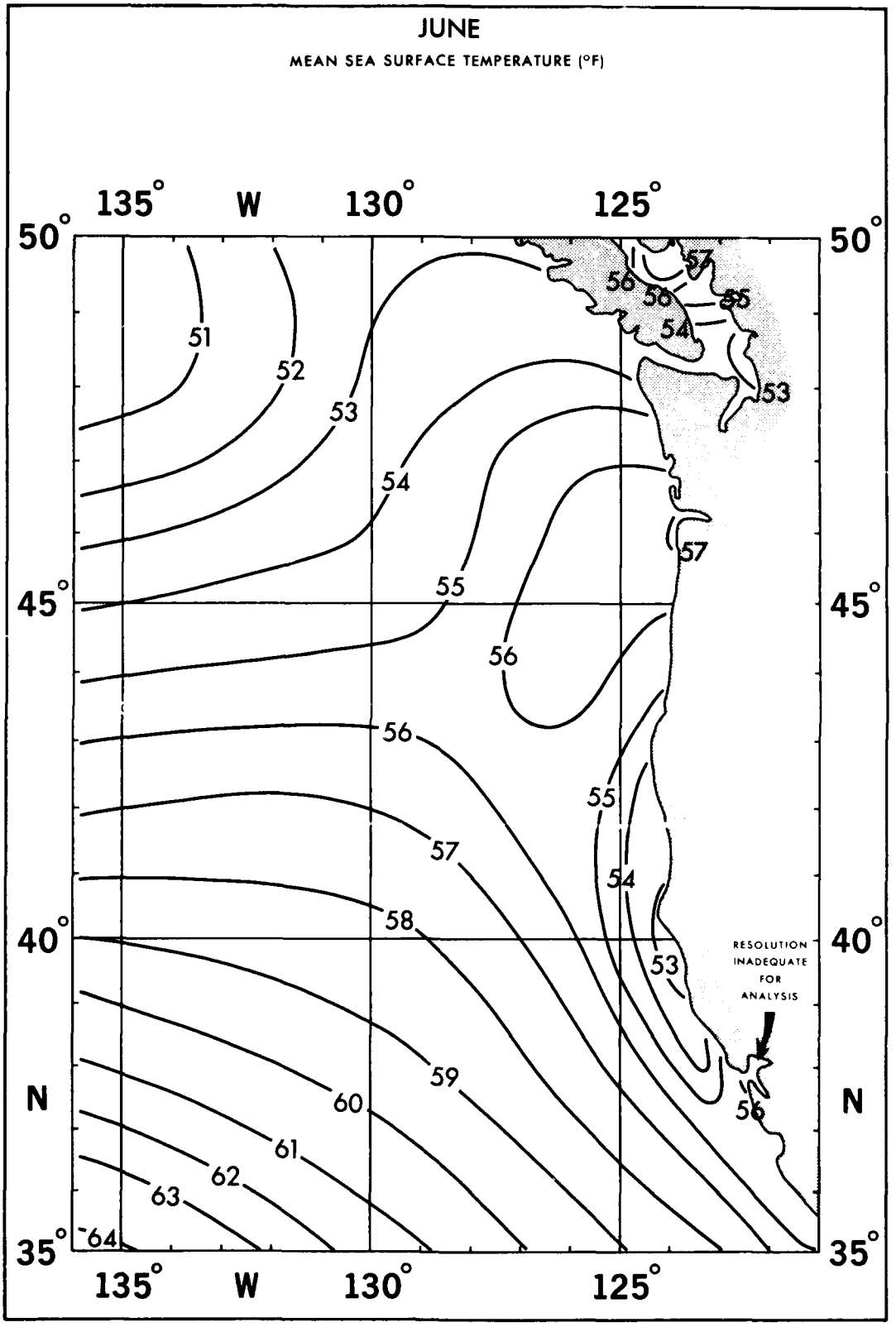

JUNE
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

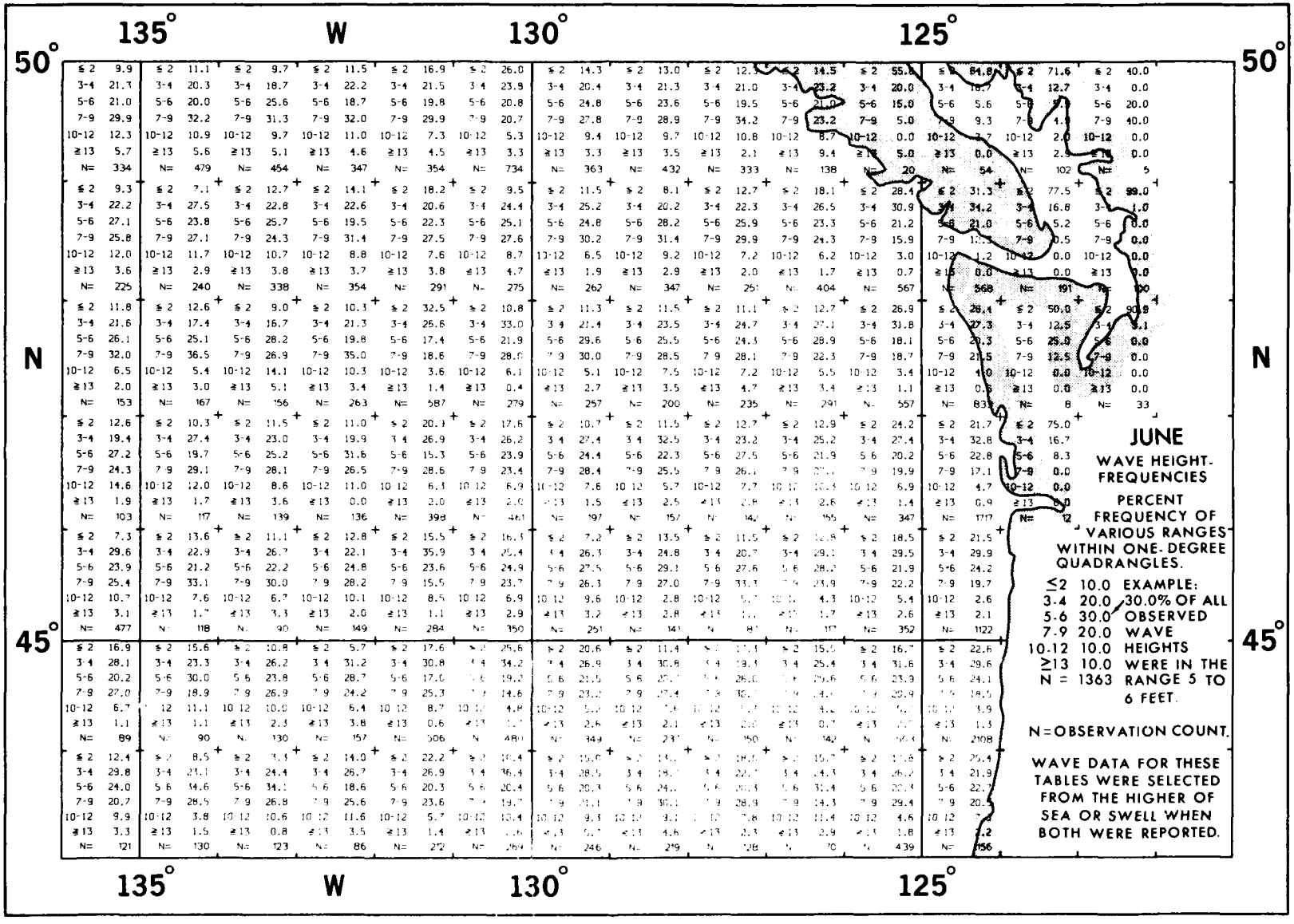

JUNE
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
10
50
30
20
40
10
5
50
10
15
20
40
25
50
15
20
15
35

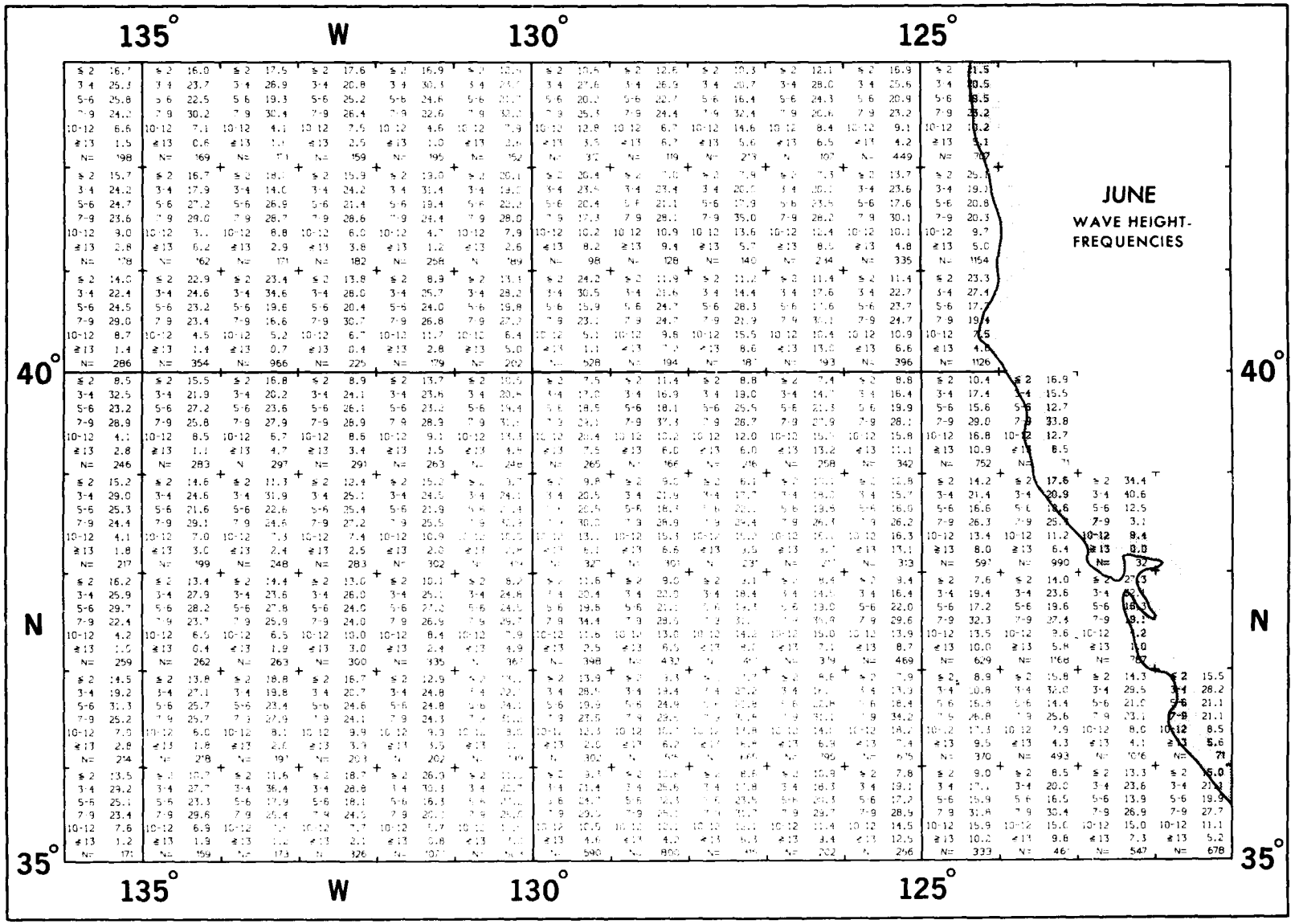

135° W 130° 125°
50°
N
45°
JUNE
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

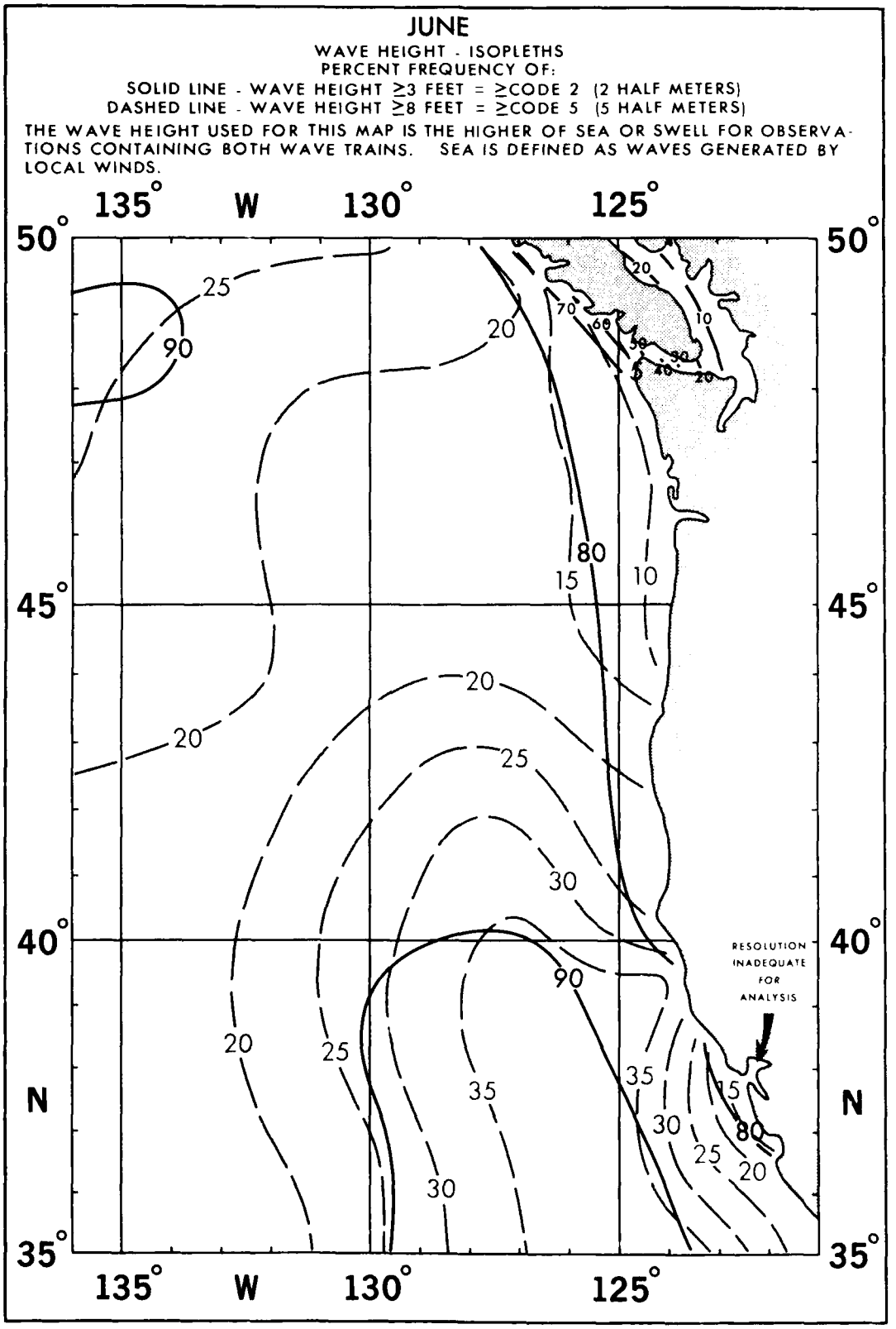

135° W 130° 125°
40° N 35°
JUNE
SURFACE
WIND ROSE

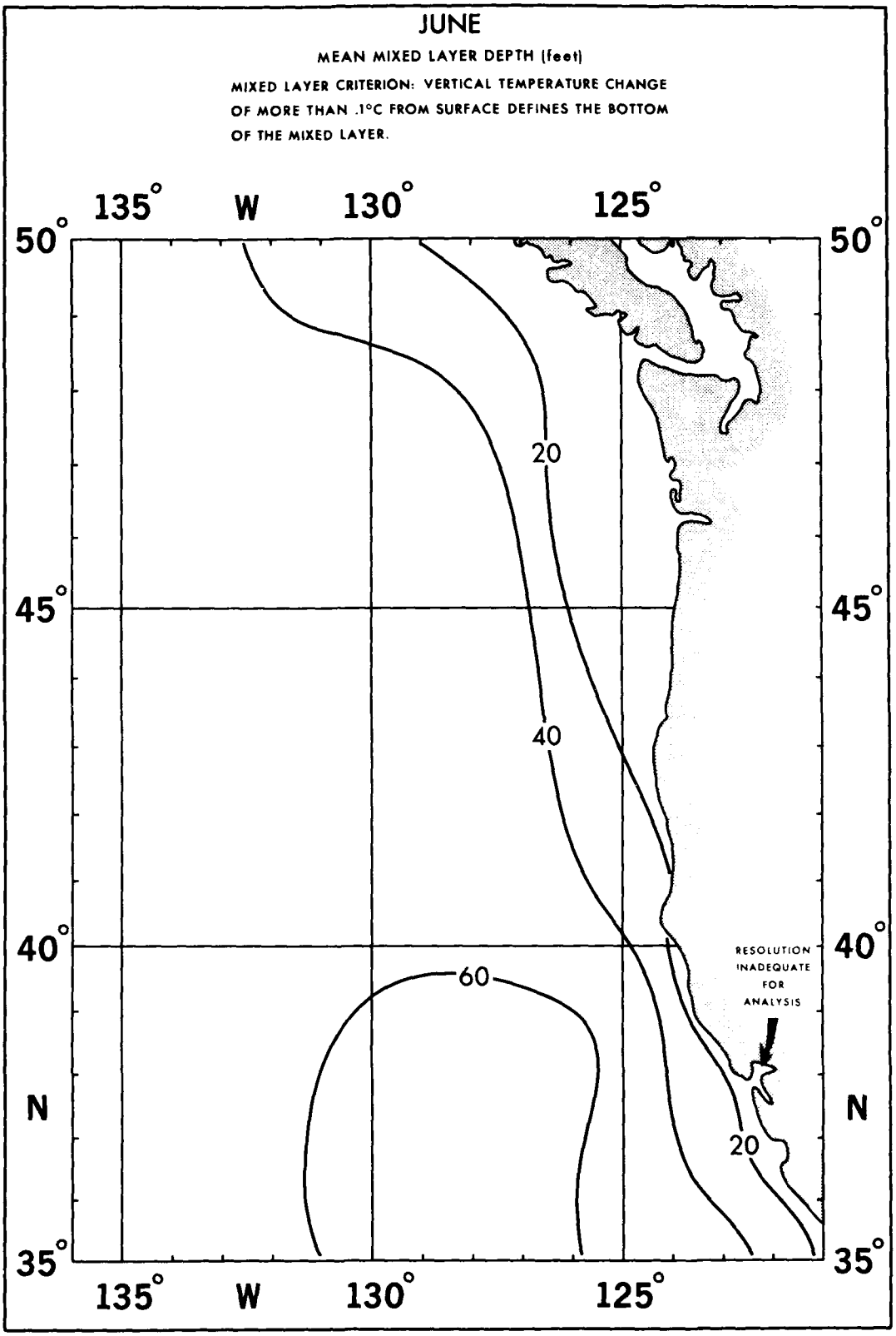

JUNE
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
52
53
54
55
56
57
58
59
60
61
62
63
RESOLUTION INADEQUATE FOR ANALYSIS

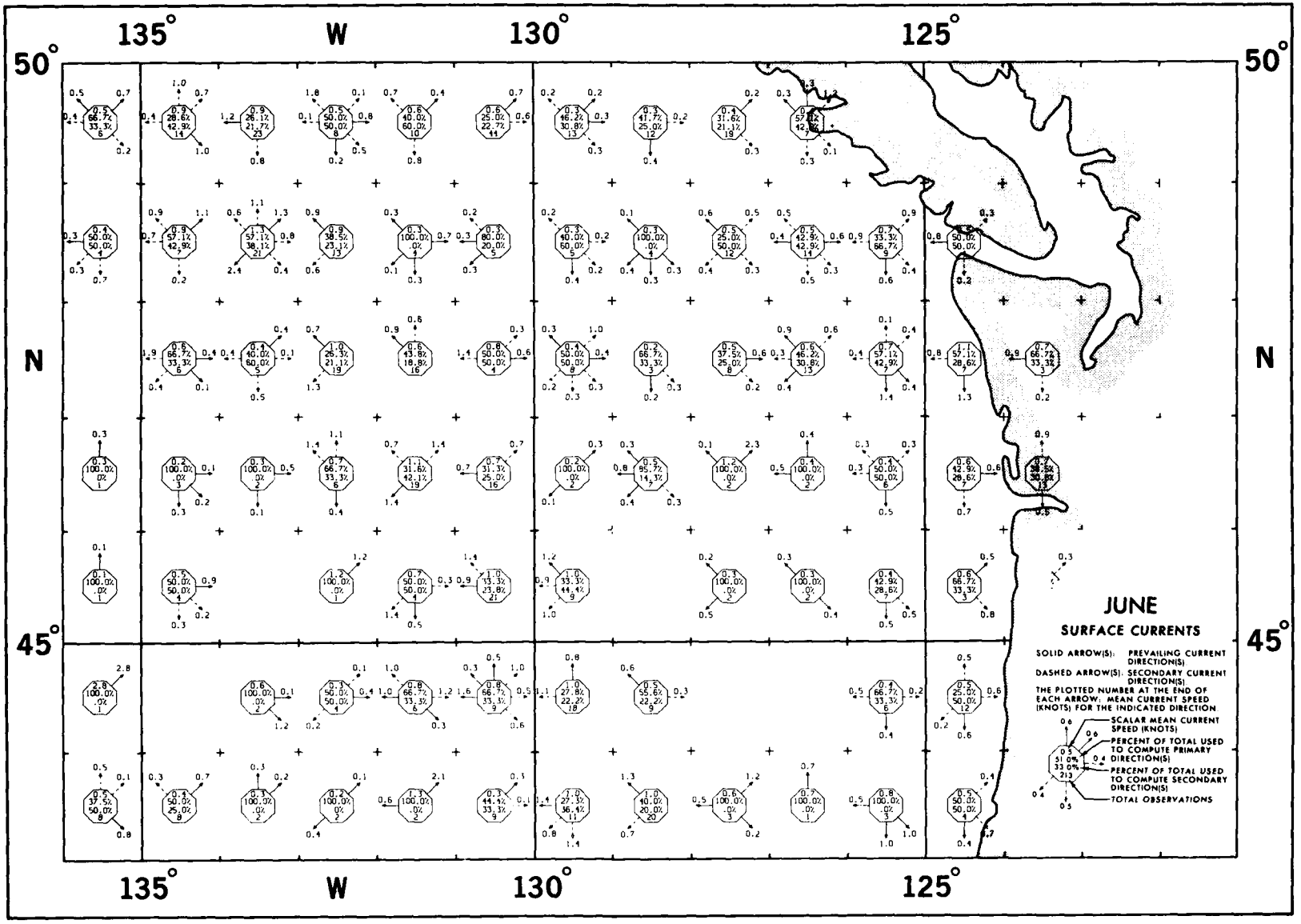

JUNE
MEAN SEA SURFACE TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
51
52
53
54
55
56
57
58
59
60
61
62
63
64
RESOLUTION INADEQUATE FOR ANALYSIS

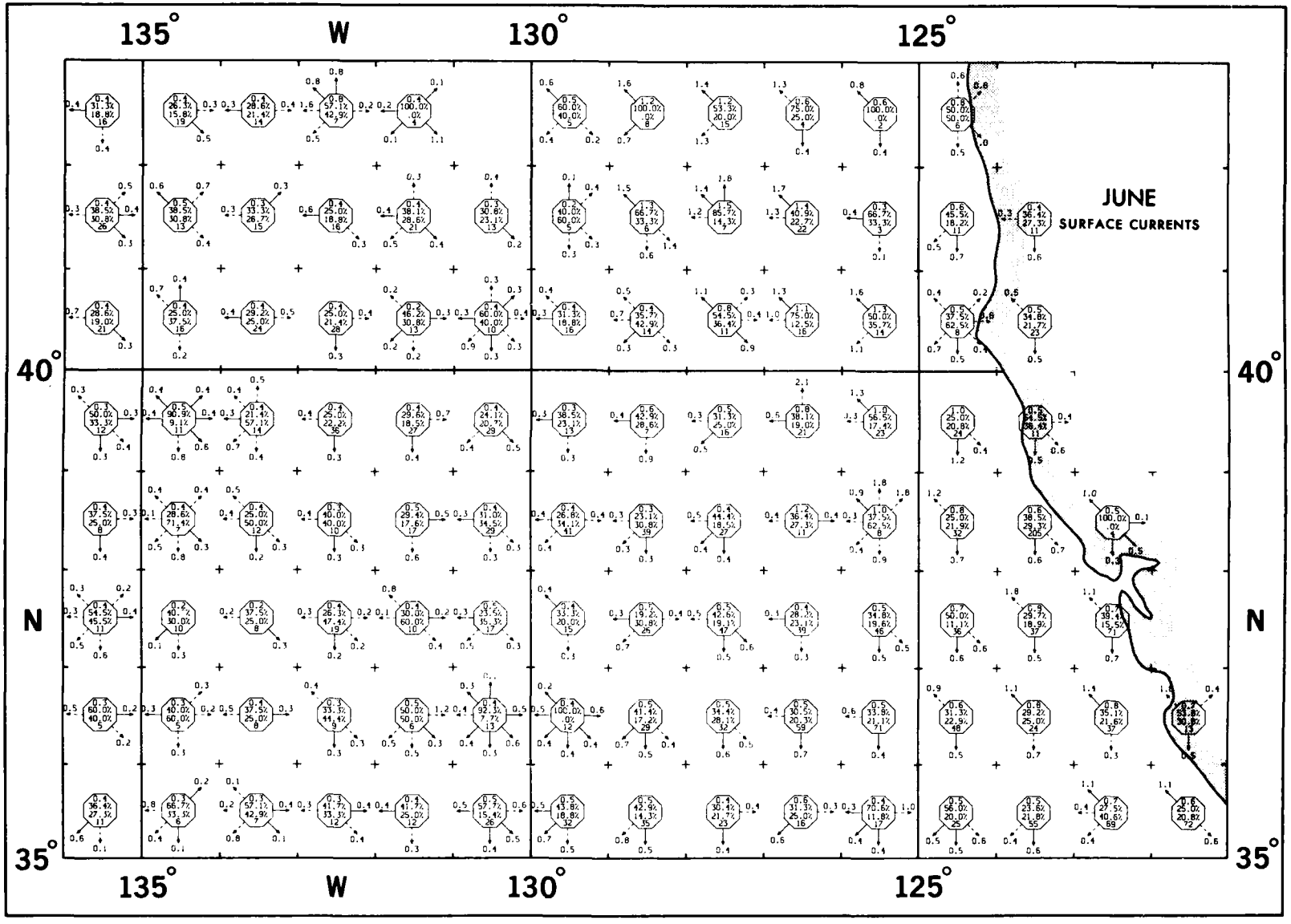

135° W 130° 125°
50°
45°
N
≤2 9.9 ≤2 11.1 ≤2 9.7 ≤2 11.5 ≤2 16.9 ≤2 26.0 ≤2 14.3 ≤2 13.0 ≤2 12.5 ≤2 14.5 ≤2 55.6 ≤2 84.8 ≤2 71.6 ≤2 40.0
3-4 21.3 3-4 20.3 3-4 18.7 3-4 22.2 3-4 21.5 3-4 23.9 3-4 20.4 3-4 21.3 3-4 21.0 3-4 23.2 3-4 20.0 3-4 16.7 3-4 12.7 3-4 0.0
5-6 21.0 5-6 20.0 5-6 25.6 5-6 18.7 5-6 19.8 5-6 20.8 5-6 24.8 5-6 23.6 5-6 19.5 5-6 21.0 5-6 15.0 5-6 5.6 5-6 5.1 5-6 20.0
7-9 29.9 7-9 32.2 7-9 31.3 7-9 32.0 7-9 29.9 7-9 20.7 7-9 27.8 7-9 28.9 7-9 34.2 7-9 23.2 7-9 5.0 7-9 9.3 7-9 4.1 7-9 40.0
10-12 12.3 10-12 10.9 10-12 9.7 10-12 11.0 10-12 7.3 10-12 5.3 10-12 9.4 10-12 9.7 10-12 10.8 10-12 8.7 10-12 0.0 10-12 3.7 10-12 2.0 10-12 0.0
≥13 5.7 ≥13 5.6 ≥13 5.1 ≥13 4.6 ≥13 4.5 ≥13 3.3 ≥13 3.3 ≥13 3.5 ≥13 2.1 ≥13 9.4 ≥13 5.0 ≥13 0.0 ≥13 2.9 ≥13 0.0
N= 334 N= 479 N= 454 N= 347 N= 354 N= 734 N= 363 N= 432 N= 333 N= 138 N= 20 N= 54 N= 102 N= 5
≤2 9.3 ≤2 7.1 ≤2 12.7 ≤2 14.1 ≤2 18.2 ≤2 9.5 ≤2 11.5 ≤2 8.1 ≤2 12.7 ≤2 18.1 ≤2 28.4 ≤2 31.3 ≤2 77.5 ≤2 99.0
3-4 22.2 3-4 27.5 3-4 22.8 3-4 22.6 3-4 20.6 3-4 24.4 3-4 25.2 3-4 20.2 3-4 22.3 3-4 26.5 3-4 30.9 3-4 34.2 3-4 16.8 3-4 1.0
5-6 27.1 5-6 23.8 5-6 25.7 5-6 19.5 5-6 22.3 5-6 25.1 5-6 24.8 5-6 28.2 5-6 25.9 5-6 23.3 5-6 21.2 5-6 21.0 5-6 5.2 5-6 0.0
7-9 25.8 7-9 27.1 7-9 24.3 7-9 31.4 7-9 27.5 7-9 27.6 7-9 30.2 7-9 31.4 7-9 29.9 7-9 24.3 7-9 15.9 7-9 12.5 7-9 0.5 7-9 0.0
10-12 12.0 10-12 11.7 10-12 10.7 10-12 8.8 10-12 7.6 10-12 8.7 10-12 6.5 10-12 9.2 10-12 7.2 10-12 6.2 10-12 3.0 10-12 1.2 10-12 0.0 10-12 0.0
≥13 3.6 ≥13 2.9 ≥13 3.8 ≥13 3.7 ≥13 3.8 ≥13 4.7 ≥13 1.9 ≥13 2.9 ≥13 2.0 ≥13 1.7 ≥13 0.7 ≥13 0.8 ≥13 0.0 ≥13 0.0
N= 225 N= 240 N= 338 N= 354 N= 291 N= 275 N= 262 N= 347 N= 251 N= 404 N= 567 N= 568 N= 191 N= 100
≤2 11.8 ≤2 12.6 ≤2 9.0 ≤2 10.3 ≤2 32.5 ≤2 10.8 ≤2 11.3 ≤2 11.5 ≤2 11.1 ≤2 12.7 ≤2 26.9 ≤2 26.4 ≤2 50.0 ≤2 90.9
3-4 21.6 3-4 17.4 3-4 16.7 3-4 21.3 3-4 25.8 3-4 33.0 3-4 21.4 3-4 23.5 3-4 24.7 3-4 27.1 3-4 31.8 3-4 27.3 3-4 12.5 3-4 9.1
5-6 26.1 5-6 25.1 5-6 28.2 5-6 19.8 5-6 17.4 5-6 21.9 5-6 29.6 5-6 25.5 5-6 24.3 5-6 28.9 5-6 18.1 5-6 20.3 5-6 25.0 5-6 0.0
7-9 32.0 7-9 36.5 7-9 26.9 7-9 35.0 7-9 18.6 7-9 28.6 7-9 30.0 7-9 28.5 7-9 28.1 7-9 22.3 7-9 18.7 7-9 21.5 7-9 12.5 7-9 0.0
10-12 6.5 10-12 5.4 10-12 14.1 10-12 10.3 10-12 3.6 10-12 6.1 10-12 5.1 10-12 7.5 10-12 7.2 10-12 5.5 10-12 3.4 10-12 1.0 10-12 0.0 10-12 0.0
≥13 2.0 ≥13 3.0 ≥13 5.1 ≥13 3.4 ≥13 1.4 ≥13 0.4 ≥13 2.7 ≥13 3.5 ≥13 4.7 ≥13 3.4 ≥13 1.1 ≥13 0.5 ≥13 0.0 ≥13 0.0
N= 153 N= 167 N= 156 N= 263 N= 587 N= 279 N= 257 N= 200 N= 235 N= 291 N= 557 N= 835 N= 8 N= 33
≤2 12.6 ≤2 10.3 ≤2 11.5 ≤2 11.0 ≤2 20.9 ≤2 17.6 ≤2 10.7 ≤2 11.5 ≤2 12.7 ≤2 12.9 ≤2 24.2 ≤2 21.7 ≤2 75.0
3-4 19.4 3-4 27.4 3-4 23.0 3-4 19.9 3-4 26.9 3-4 26.2 3-4 27.4 3-4 32.5 3-4 23.2 3-4 25.2 3-4 27.4 3-4 32.8 3-4 16.7
5-6 27.2 5-6 19.7 5-6 25.2 5-6 31.6 5-6 15.3 5-6 23.9 5-6 24.4 5-6 22.3 5-6 27.5 5-6 21.9 5-6 20.2 5-6 22.8 5-6 8.3
7-9 24.3 7-9 29.1 7-9 28.1 7-9 26.5 7-9 28.6 7-9 23.4 7-9 28.4 7-9 25.6 7-9 26.1 7-9 19.9 7-9 17.1 7-9 0.0
10-12 14.6 10-12 12.0 10-12 8.6 10-12 11.0 10-12 6.3 10-12 6.9 10-12 7.6 10-12 5.7 10-12 7.7 10-12 6.9 10-12 4.7 10-12 0.0
≥13 1.9 ≥13 1.7 ≥13 3.6 ≥13 0.0 ≥13 2.0 ≥13 2.0 ≥13 1.5 ≥13 2.5 ≥13 2.8 ≥13 2.6 ≥13 1.4 ≥13 0.9 ≥13 0.0
N= 103 N= 117 N= 139 N= 136 N= 398 N= 461 N= 197 N= 157 N= 142 N= 155 N= 347 N= 1717 N= 12
≤2 7.3 ≤2 13.6 ≤2 11.1 ≤2 12.8 ≤2 15.5 ≤2 16.3 ≤2 7.2 ≤2 13.5 ≤2 11.5 ≤2 12.8 ≤2 18.5 ≤2 21.5
3-4 29.6 3-4 22.9 3-4 26.7 3-4 22.1 3-4 35.9 3-4 25.4 3-4 26.3 3-4 24.8 3-4 20.7 3-4 29.1 3-4 29.5 3-4 29.9
5-6 23.9 5-6 21.2 5-6 22.2 5-6 24.8 5-6 23.6 5-6 24.9 5-6 27.5 5-6 29.1 5-6 27.6 5-6 28.2 5-6 21.9 5-6 24.2
7-9 25.4 7-9 33.1 7-9 30.0 7-9 28.2 7-9 15.5 7-9 23.7 7-9 26.3 7-9 27.0 7-9 33.3 7-9 23.9 7-9 22.2 7-9 19.7
10-12 10.7 10-12 7.6 10-12 6.7 10-12 10.1 10-12 8.5 10-12 6.9 10-12 9.6 10-12 2.8 10-12 5.7 10-12 4.3 10-12 5.4 10-12 2.6
≥13 3.1 ≥13 1.7 ≥13 3.3 ≥13 2.0 ≥13 1.1 ≥13 2.9 ≥13 3.2 ≥13 2.8 ≥13 1.7 ≥13 2.6 ≥13 2.1
N= 477 N= 118 N= 90 N= 149 N= 284 N= 350 N= 251 N= 141 N= 81 N= 117 N= 352 N= 1122
45°
≤2 16.9 ≤2 15.6 ≤2 10.8 ≤2 5.7 ≤2 17.6 ≤2 25.6 ≤2 20.6 ≤2 11.4 ≤2 15.5 ≤2 16.7 ≤2 22.6
3-4 28.1 3-4 23.3 3-4 26.2 3-4 31.2 3-4 30.8 3-4 34.2 3-4 26.9 3-4 30.8 3-4 19.3 3-4 25.4 3-4 31.6 3-4 29.6
5-6 20.2 5-6 30.0 5-6 23.8 5-6 28.7 5-6 17.0 5-6 19.2 5-6 21.5 5-6 20.7 5-6 26.0 5-6 29.6 5-6 23.9 5-6 24.1
7-9 27.0 7-9 18.9 7-9 26.9 7-9 24.2 7-9 25.3 7-9 14.6 7-9 23.2 7-9 27.4 7-9 30.1 7-9 14.7 7-9 20.9 7-9 18.5
10-12 6.7 10-12 11.1 10-12 10.0 10-12 6.4 10-12 8.7 10-12 4.8 10-12 5.2 10-12 7.6 10-12 7.3 10-12 4.6 10-12 5.1 10-12 3.9
≥13 1.1 ≥13 1.1 ≥13 2.3 ≥13 3.8 ≥13 0.6 ≥13 1.7 ≥13 2.6 ≥13 2.1 ≥13 2.0 ≥13 0.7 ≥13 2.7 ≥13 1.3
N= 89 N= 90 N= 130 N= 157 N= 506 N= 480 N= 349 N= 231 N= 150 N= 142 N= 506 N= 2108
≤2 12.4 ≤2 8.5 ≤2 7.3 ≤2 14.0 ≤2 22.2 ≤2 10.4 ≤2 15.0 ≤2 13.. ≤2 18.6 ≤2 15.7 ≤2 11.6 ≤2 25.4
3-4 29.8 3-4 21.1 3-4 24.4 3-4 26.7 3-4 26.9 3-4 36.4 3-4 28.5 3-4 18.. 3-4 22.7 3-4 24.3 3-4 46.2 3-4 21.9
5-6 24.0 5-6 14.6 5-6 34.1 5-6 18.6 5-6 20.3 5-6 20.4 5-6 20.3 5-6 24.. 5-6 26.8 5-6 31.4 5-6 20.3 5-6 22.7
7-9 20.7 7-9 28.5 7-9 26.8 7-9 25.6 7-9 23.6 7-9 19.7 7-9 21.1 7-9 30.1 7-9 28.9 7-9 14.3 7-9 29.4 7-9 20.5
10-12 9.9 10-12 3.8 10-12 10.6 10-12 11.6 10-12 5.7 10-12 13.4 10-12 9.3 10-12 9.2 10-12 7.8 10-12 11.4 10-12 4.6 10-12 7.2
≥13 3.3 ≥13 1.5 ≥13 0.8 ≥13 3.5 ≥13 1.4 ≥13 1.6 ≥13 2.7 ≥13 4.6 ≥13 2.3 ≥13 2.9 ≥13 1.8 ≥13 1.2
N= 121 N= 130 N= 123 N= 86 N= 272 N= 269 N= 246 N= 279 N= 128 N= 70 N= 439 N= 1356
JUNE
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

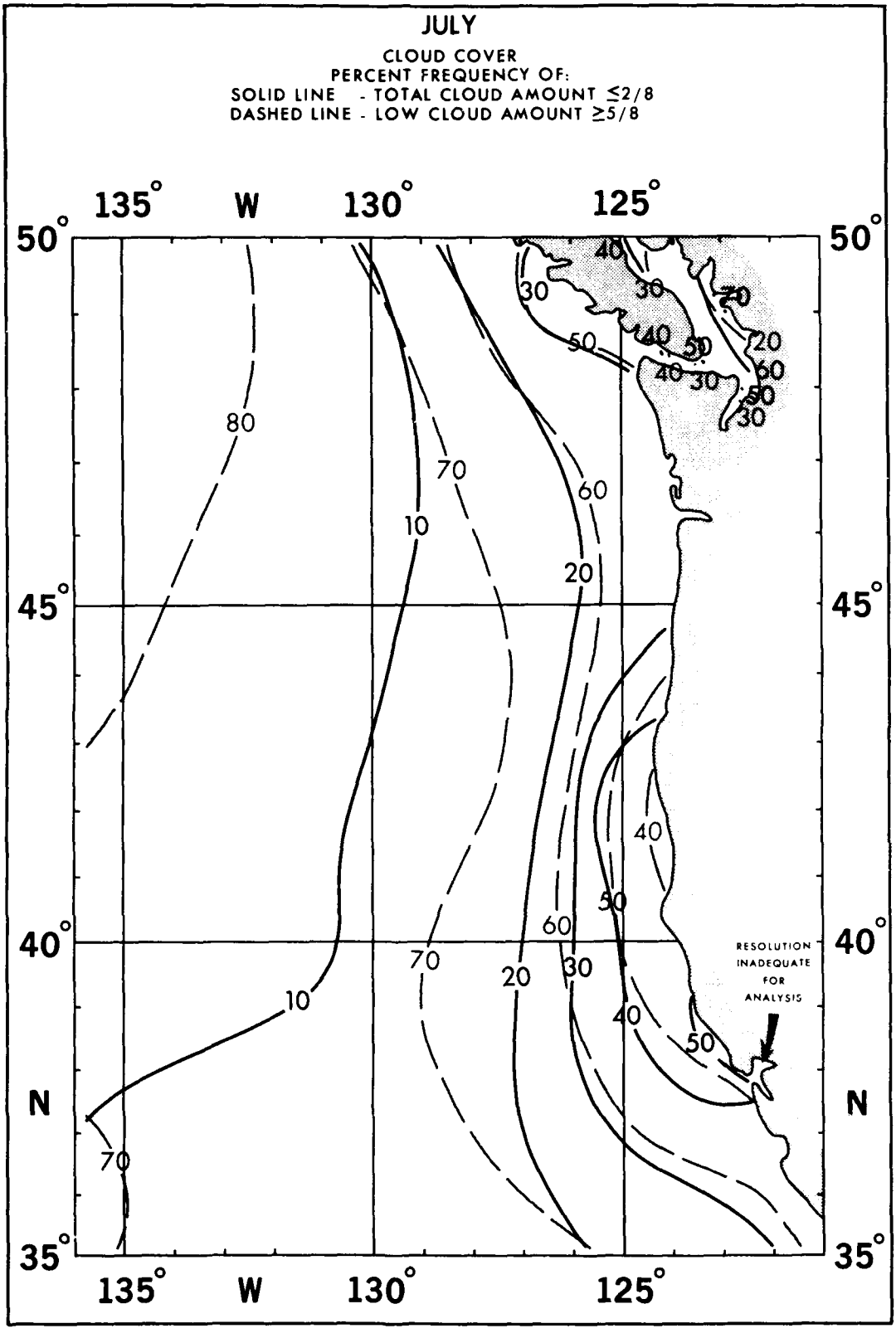

135° W 130° 125°
40°
N
35°
JUNE
WAVE HEIGHT-
FREQUENCIES

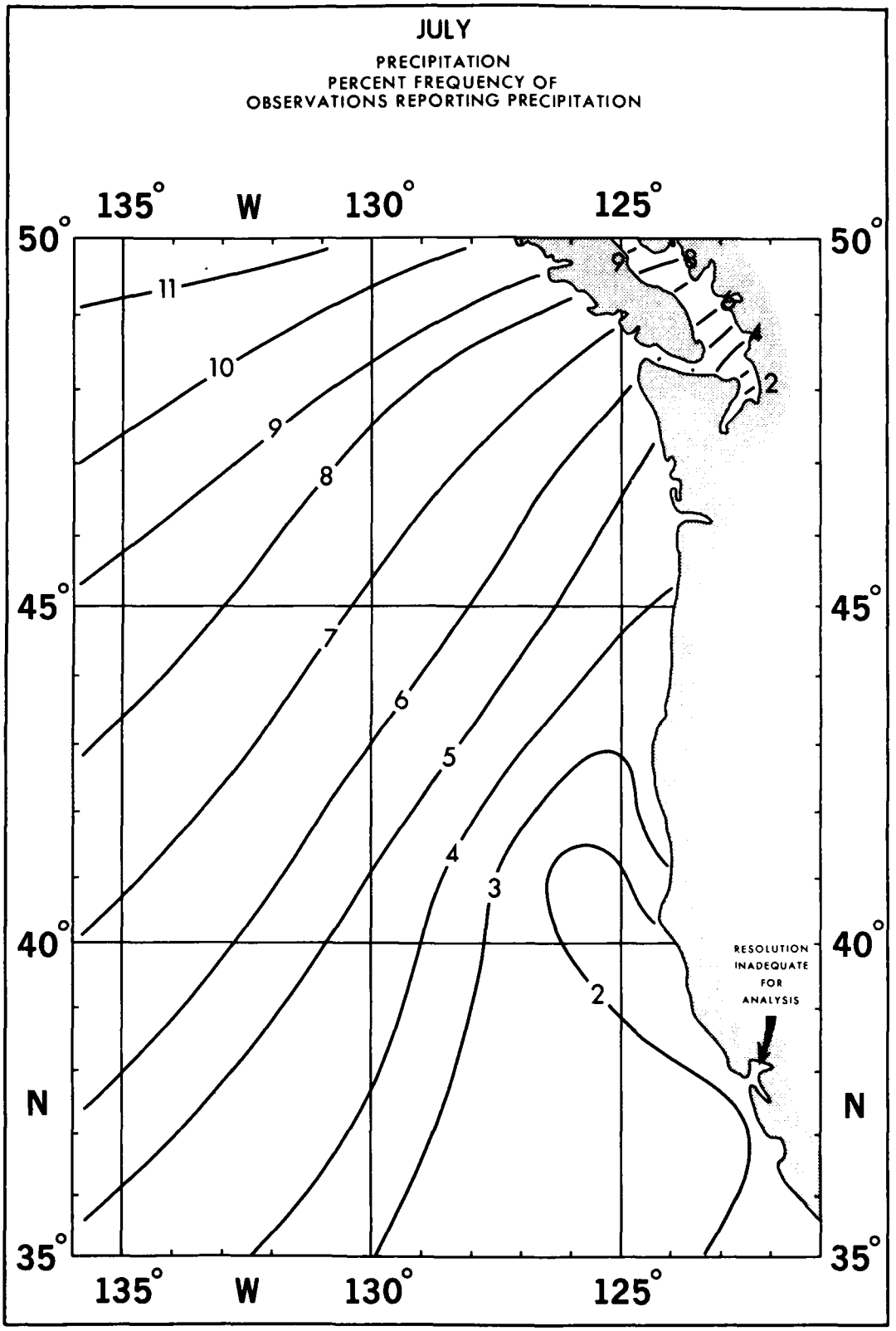

JUNE
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

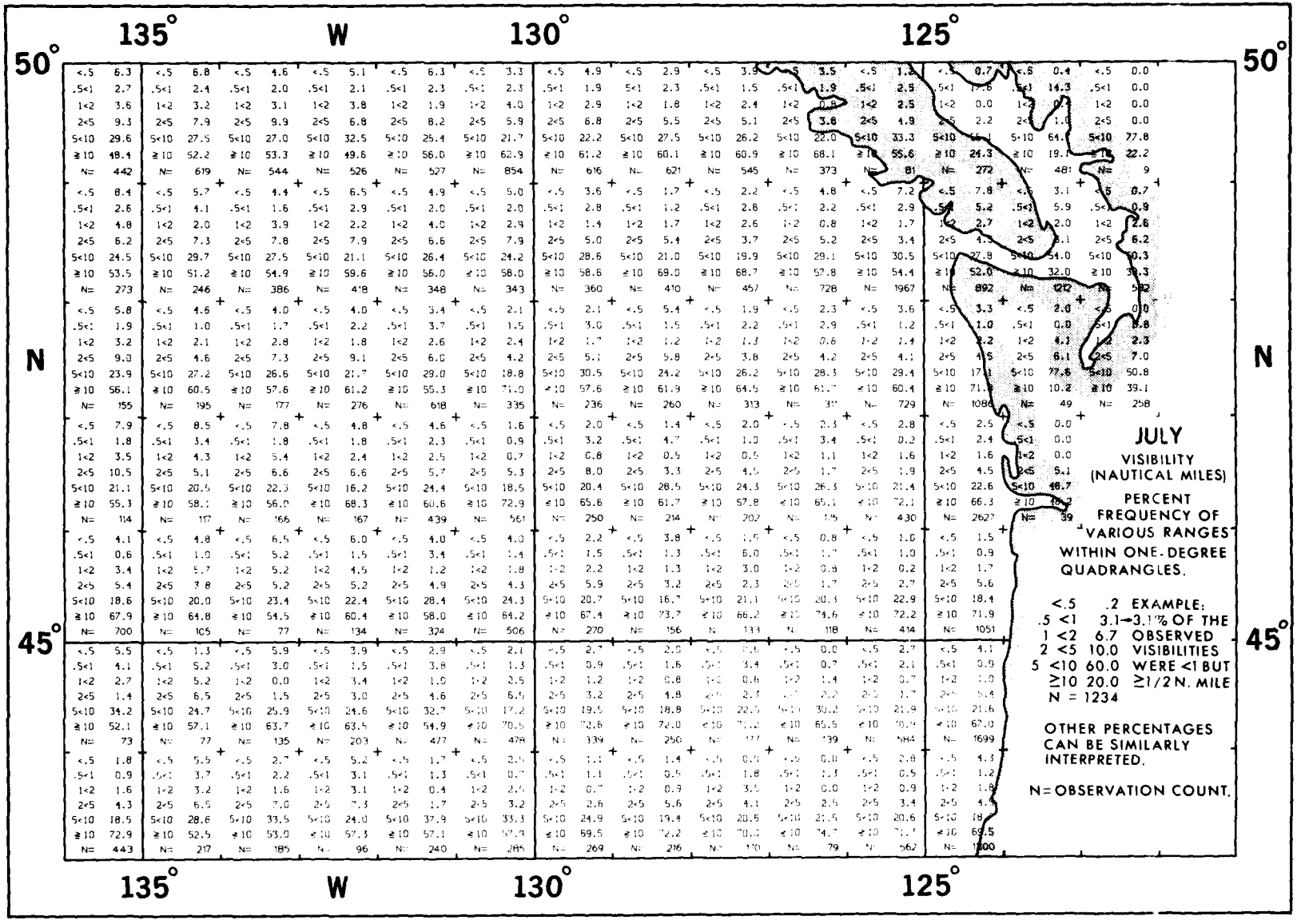

JUNE
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W 130° 125°
50°
45°
40°
35°
N
20
40
60
20
RESOLUTION INADEQUATE FOR ANALYSIS

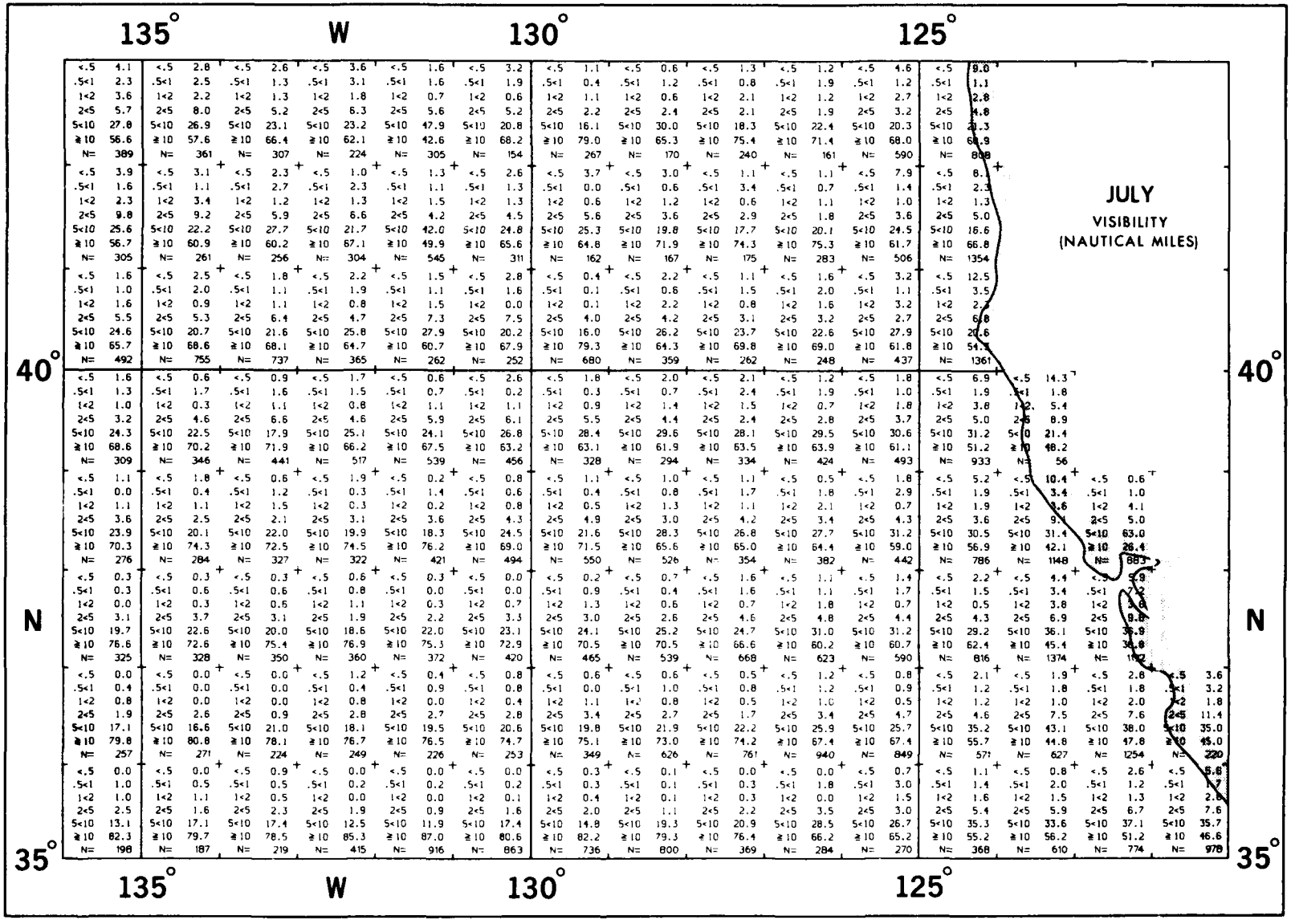

135° W 130° 125°
50°
N
45°
JUNE
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW: MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION.
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

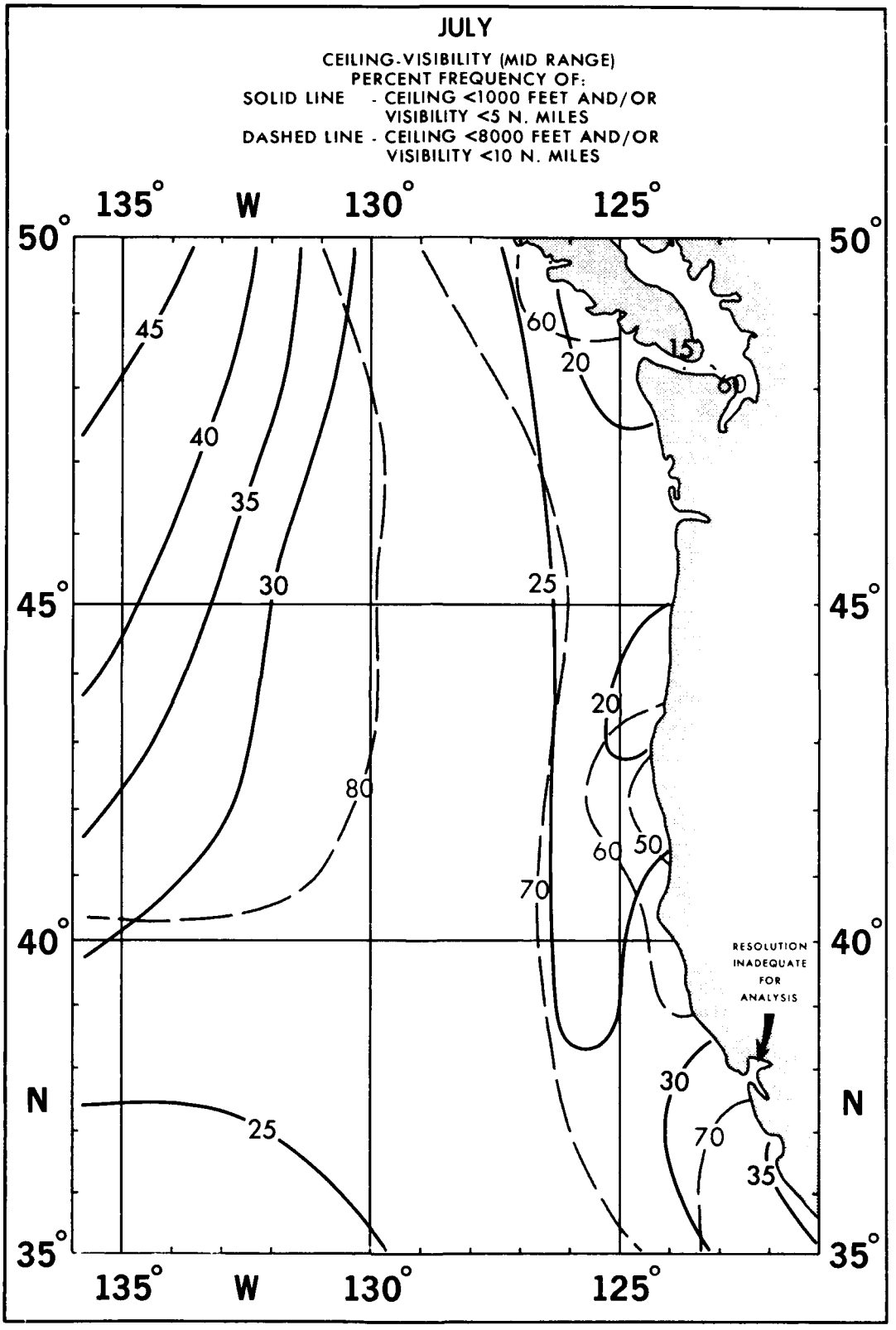

135° W 130° 125°
40°
N
35°
JUNE
SURFACE CURRENTS

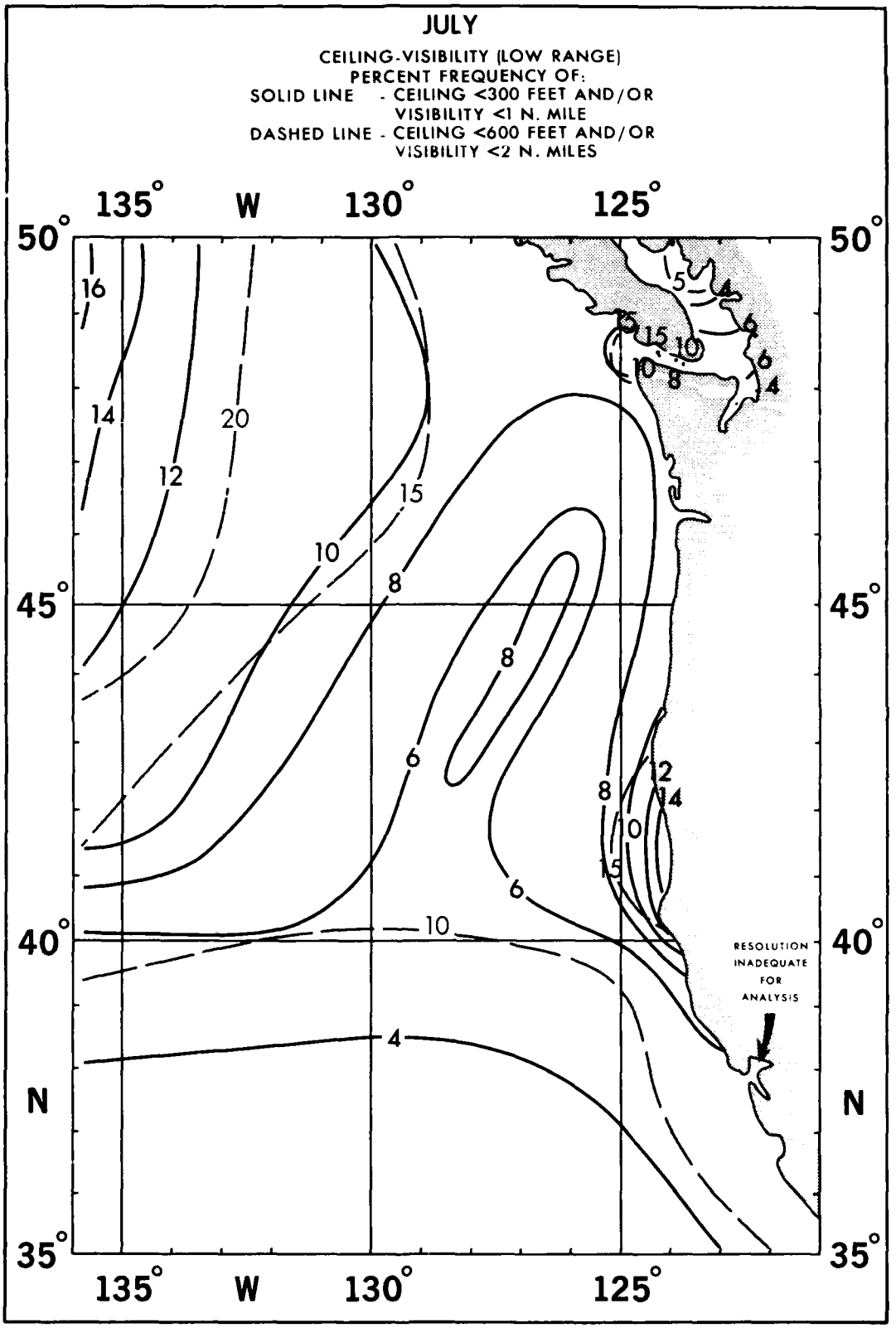

JULY
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W
130°
125°
50°
45°
40°
35°
N
80
70
10
60
20
40
50
30
RESOLUTION INADEQUATE FOR ANALYSIS

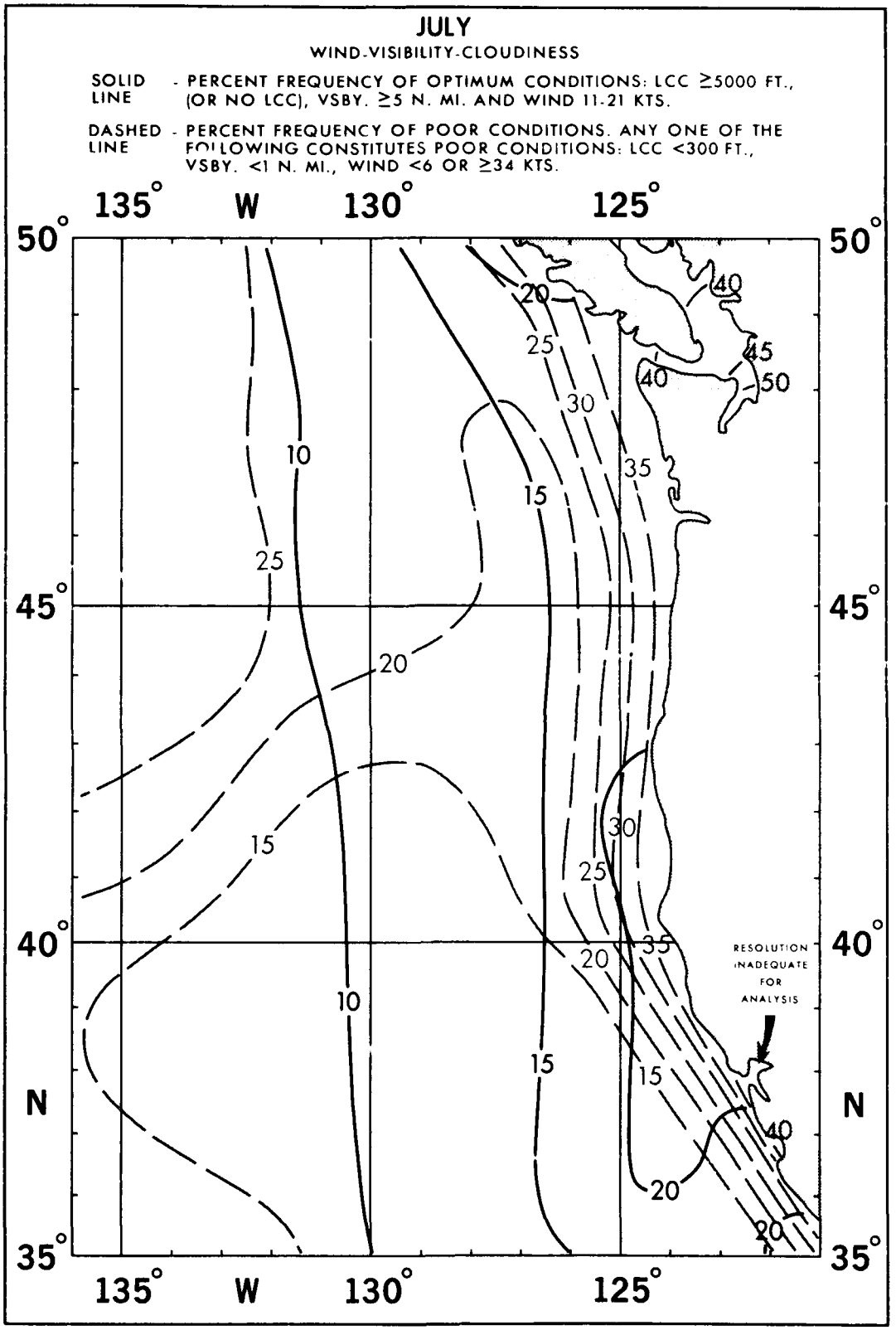

JULY
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
11
10
9
8
7
6
5
4
3
2
RESOLUTION
INADEQUATE
FOR
ANALYSIS

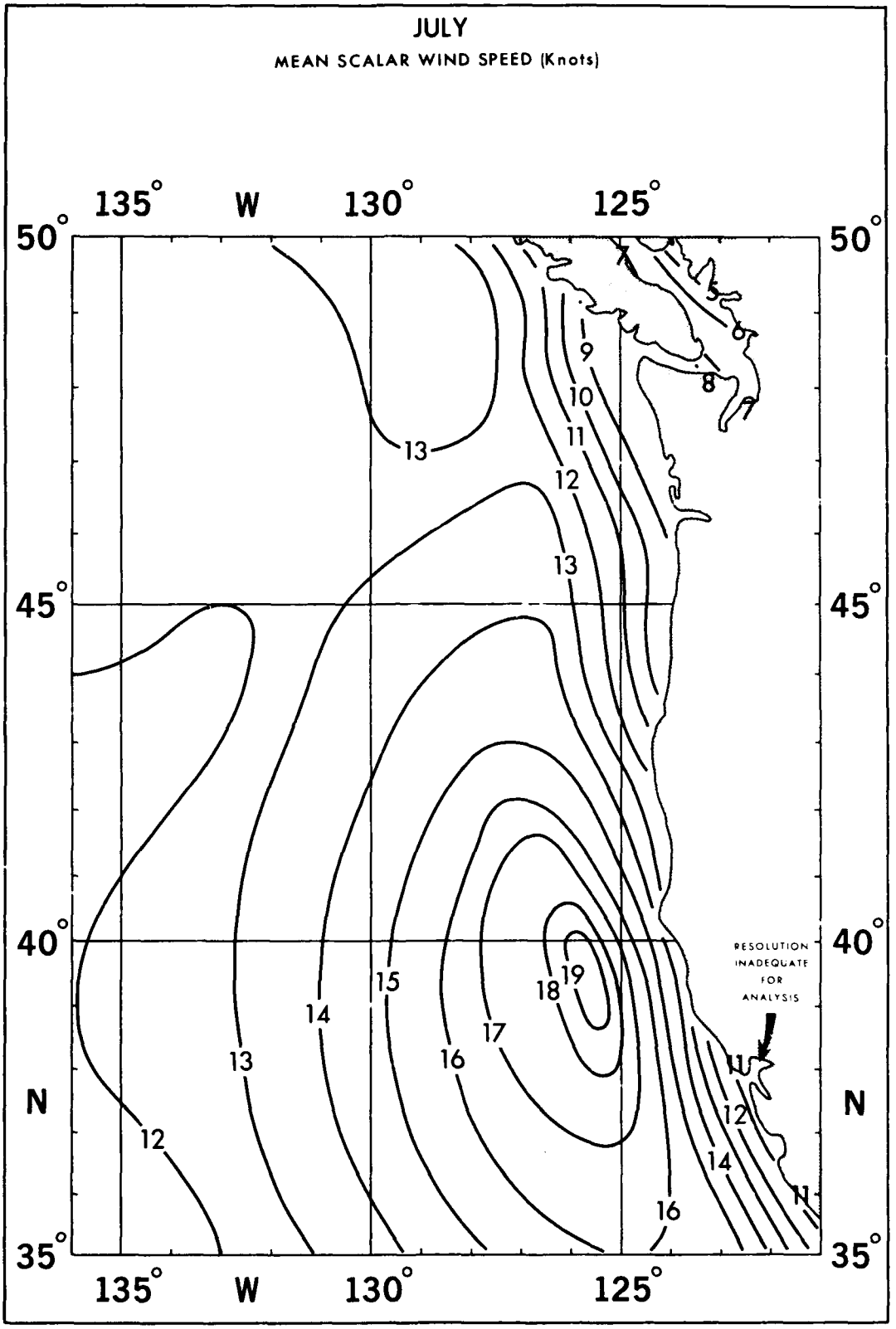

135° W 130° 125°
50°
45°
N
JULY
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N=OBSERVATION COUNT.

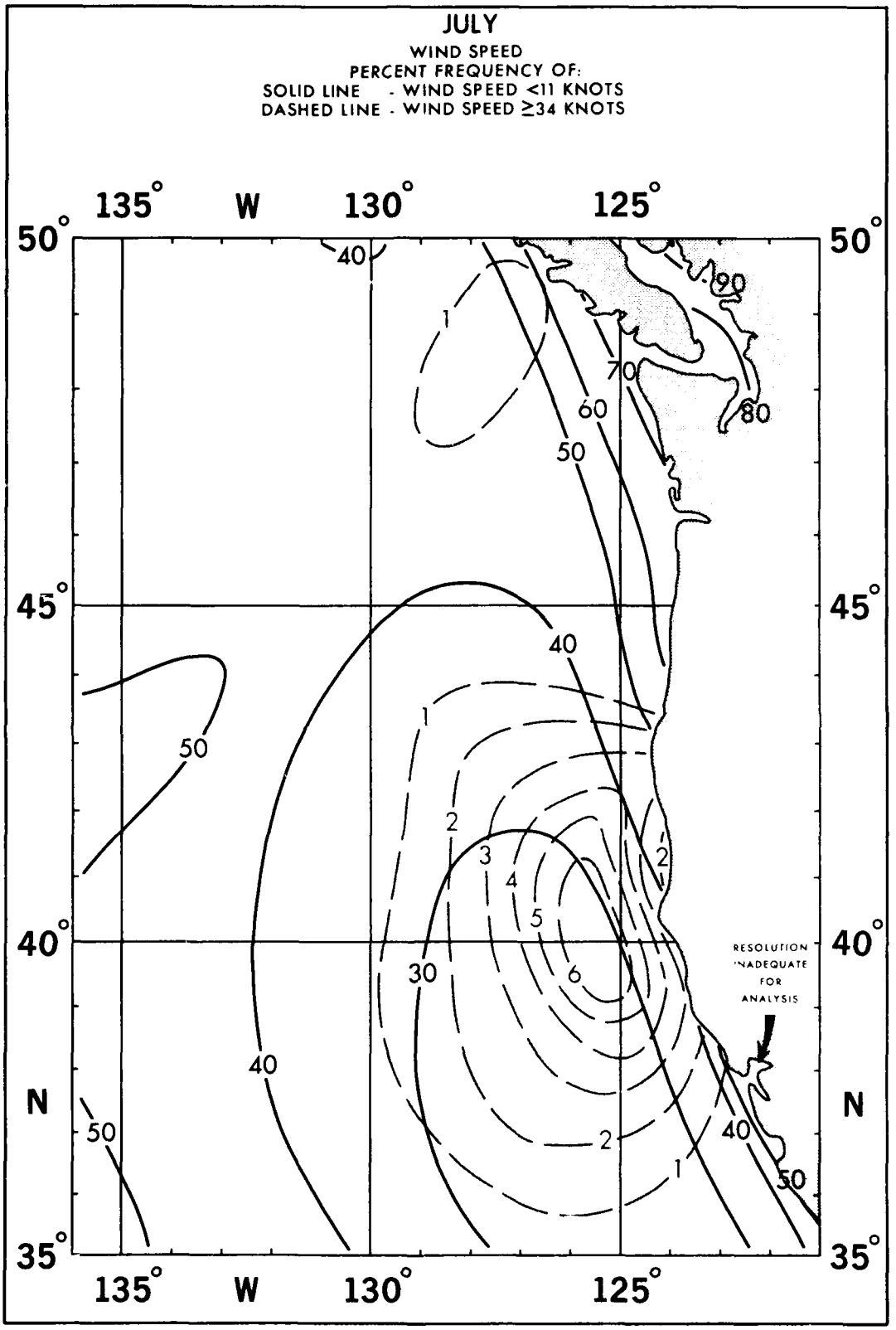

135° W 130° 125°
40°
N
35°
JULY
VISIBILITY
(NAUTICAL MILES)

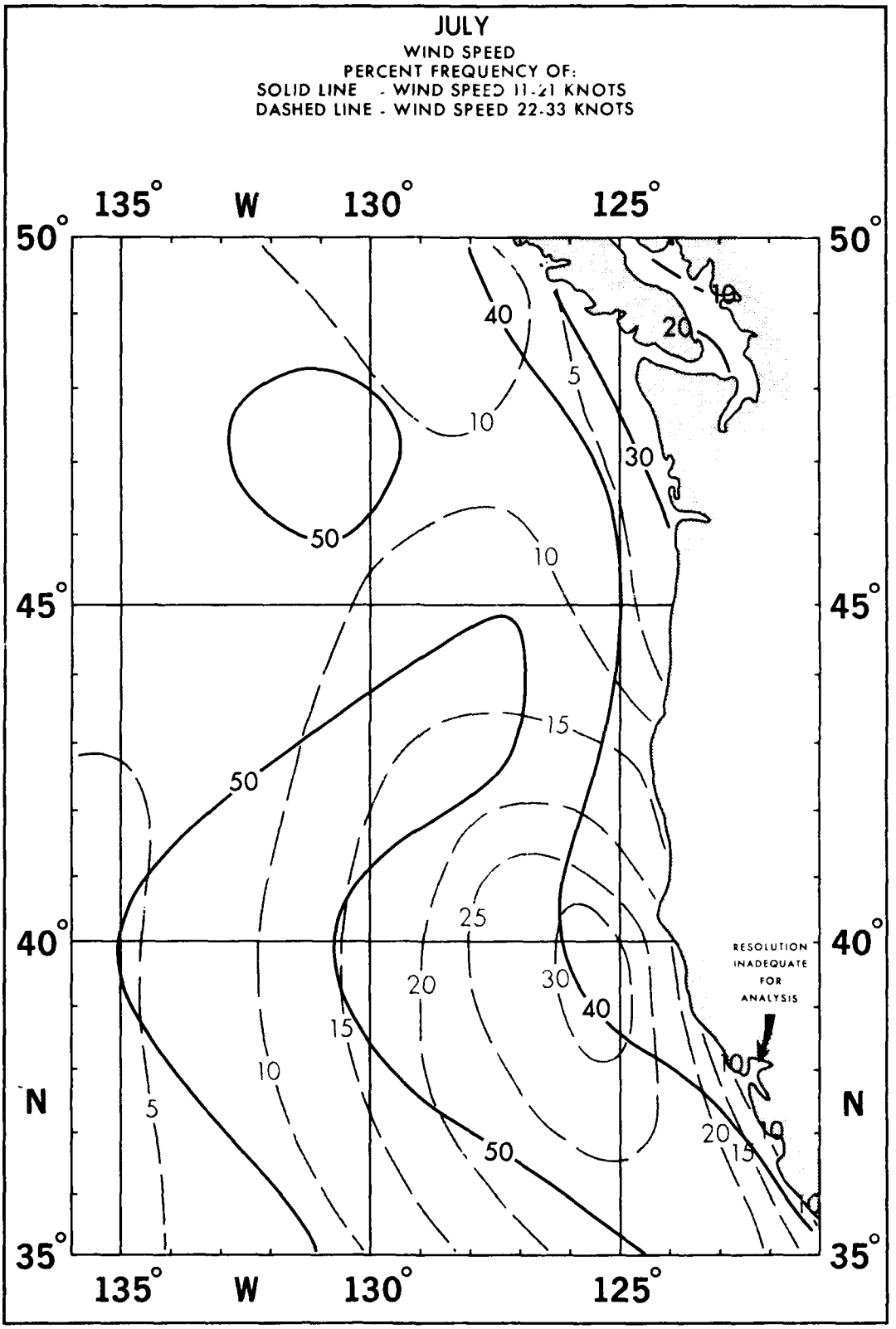

JULY
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
45
40
35
30
25
80
70
60
50
20
15
RESOLUTION INADEQUATE FOR ANALYSIS

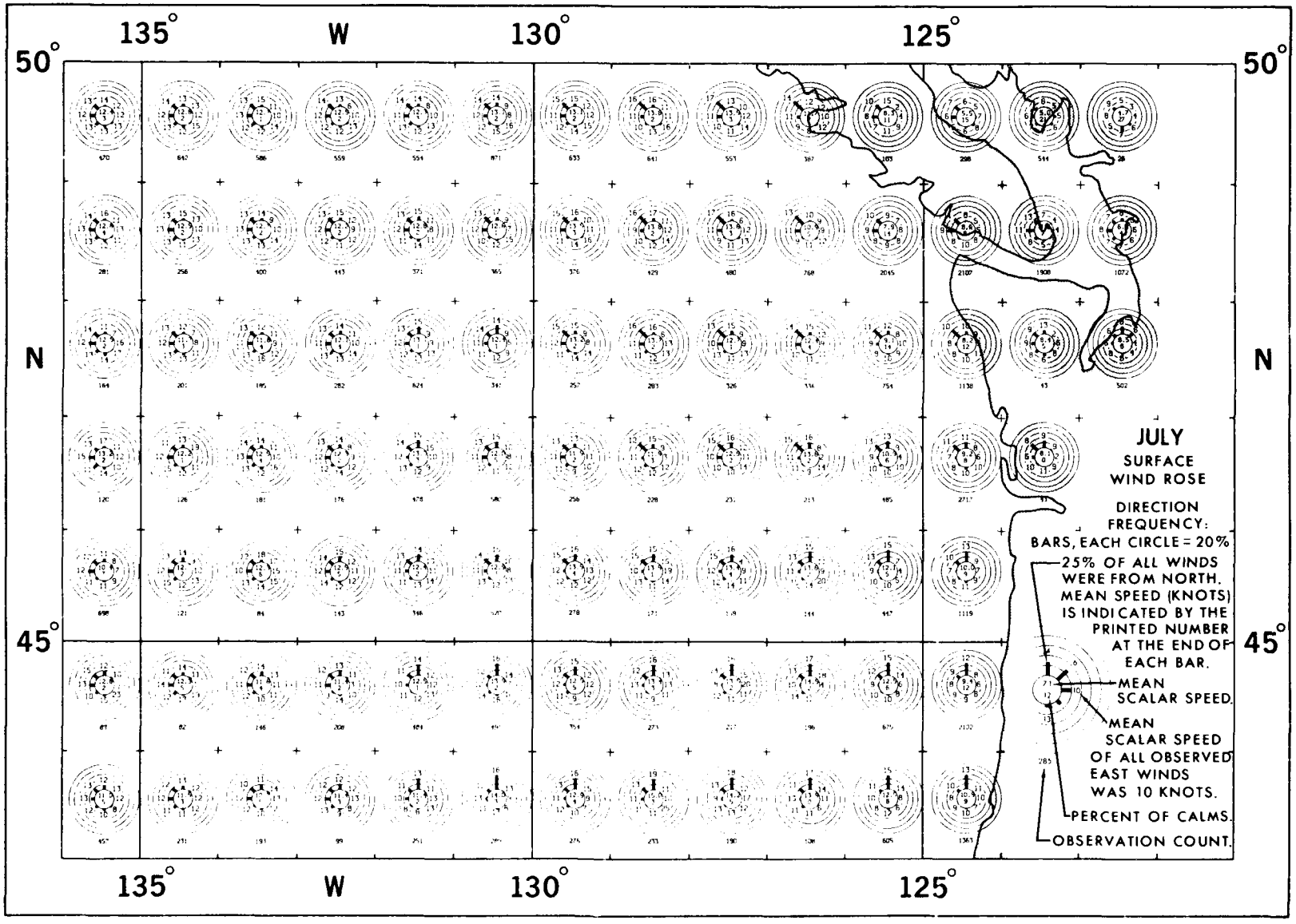

JULY
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

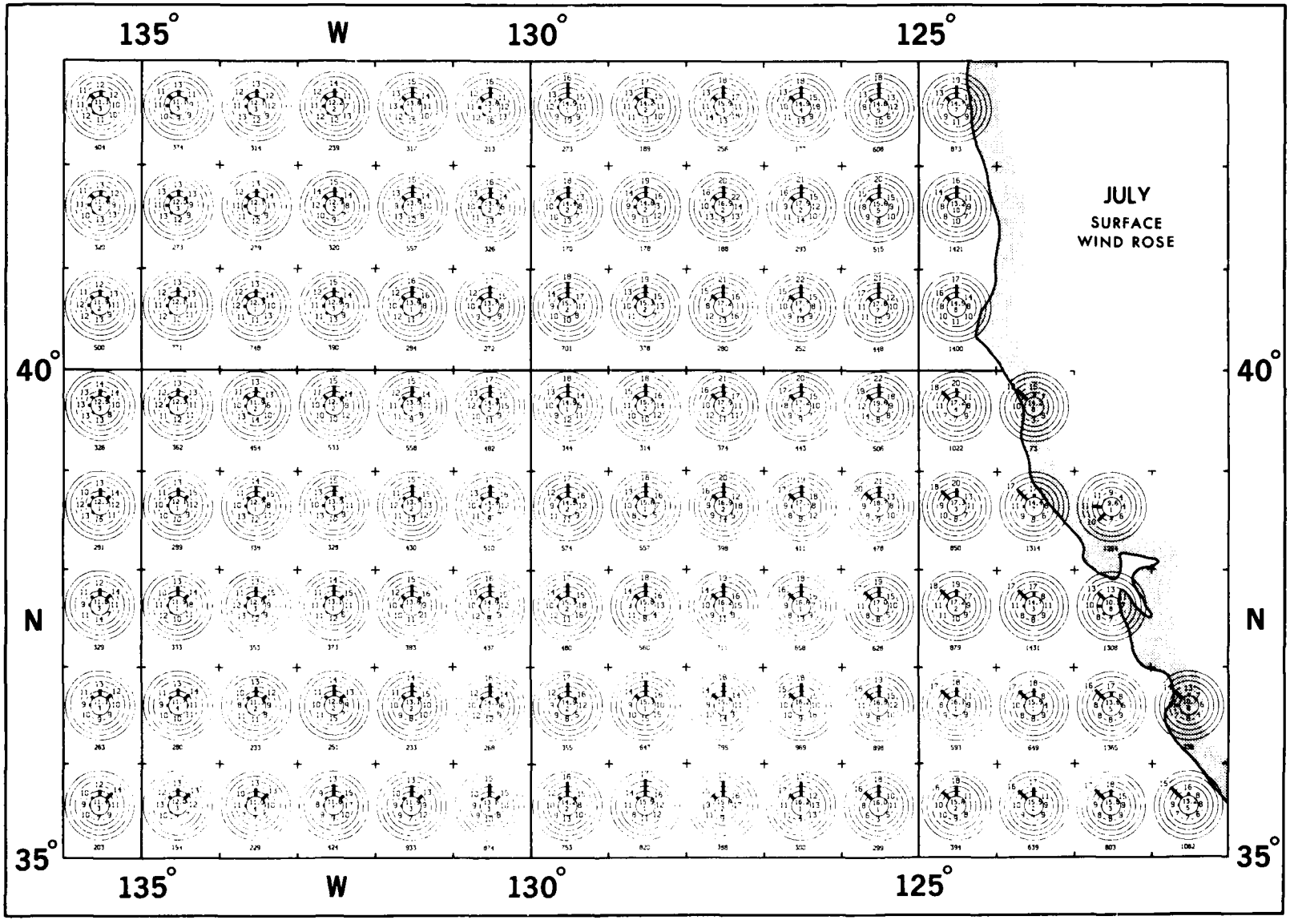

JULY
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

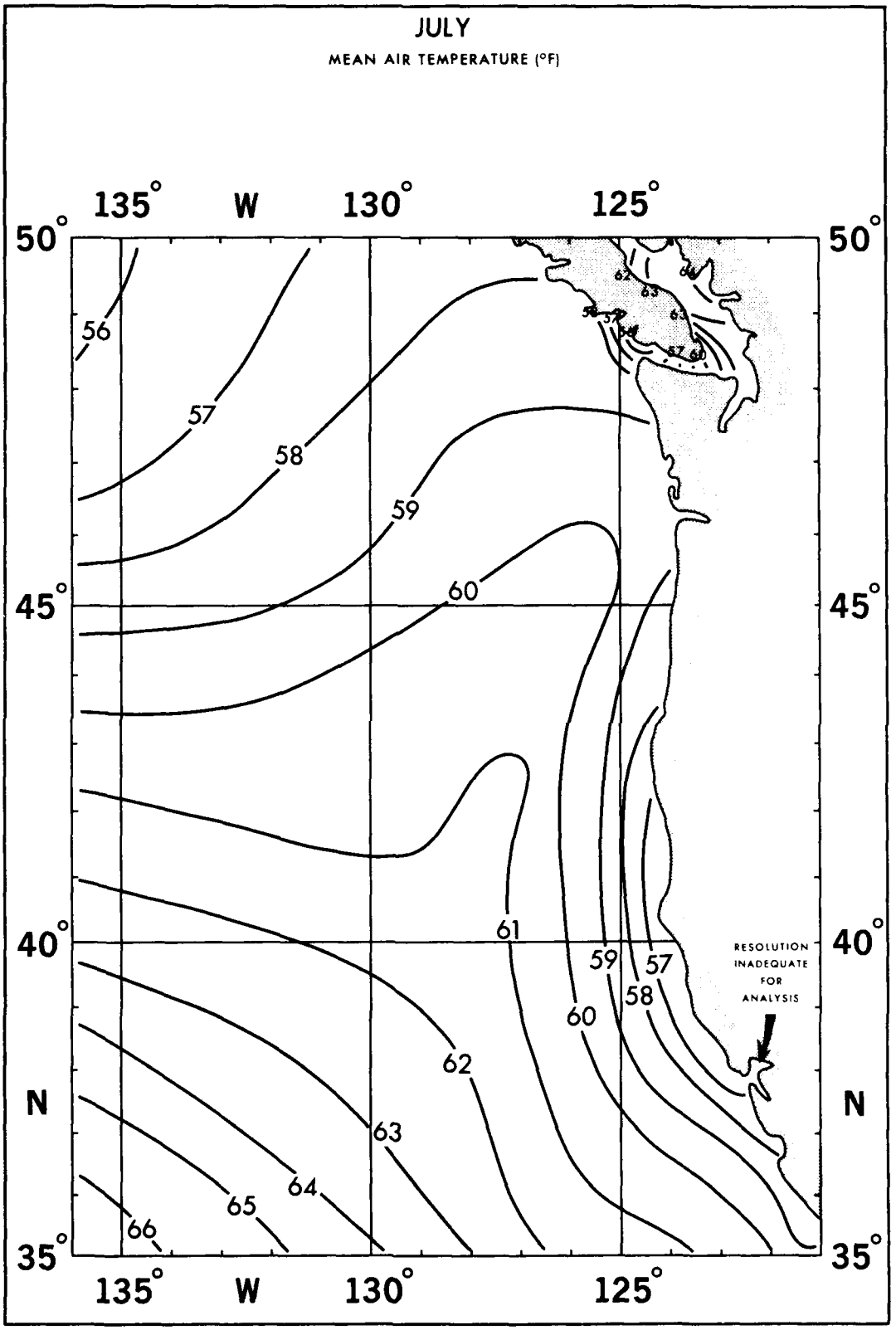

JULY
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
35°
N
13
12
13
14
15
16
17
18
19
16
11
12
14
16
11
RESOLUTION INADEQUATE FOR ANALYSIS

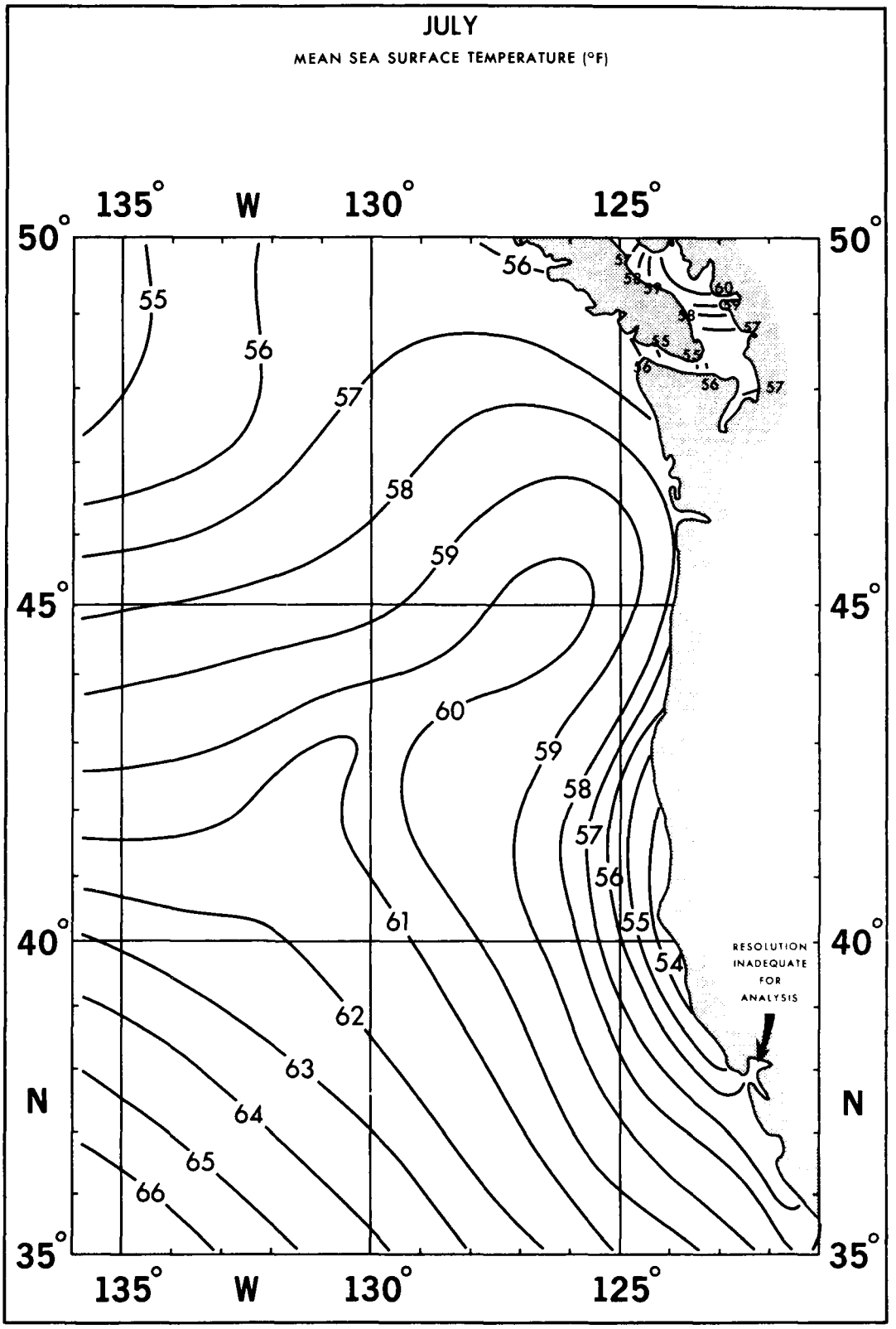

JULY
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

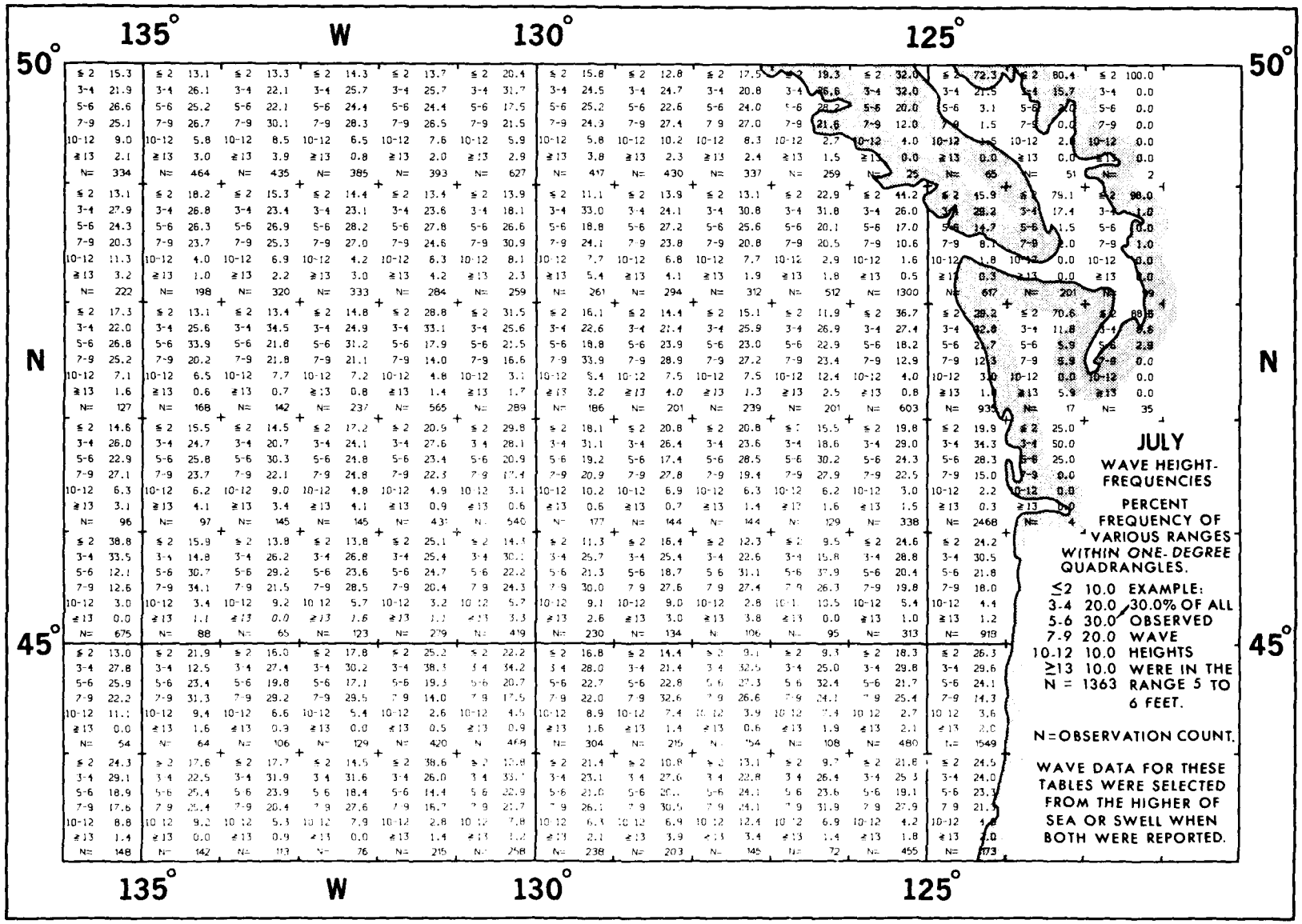

JULY
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

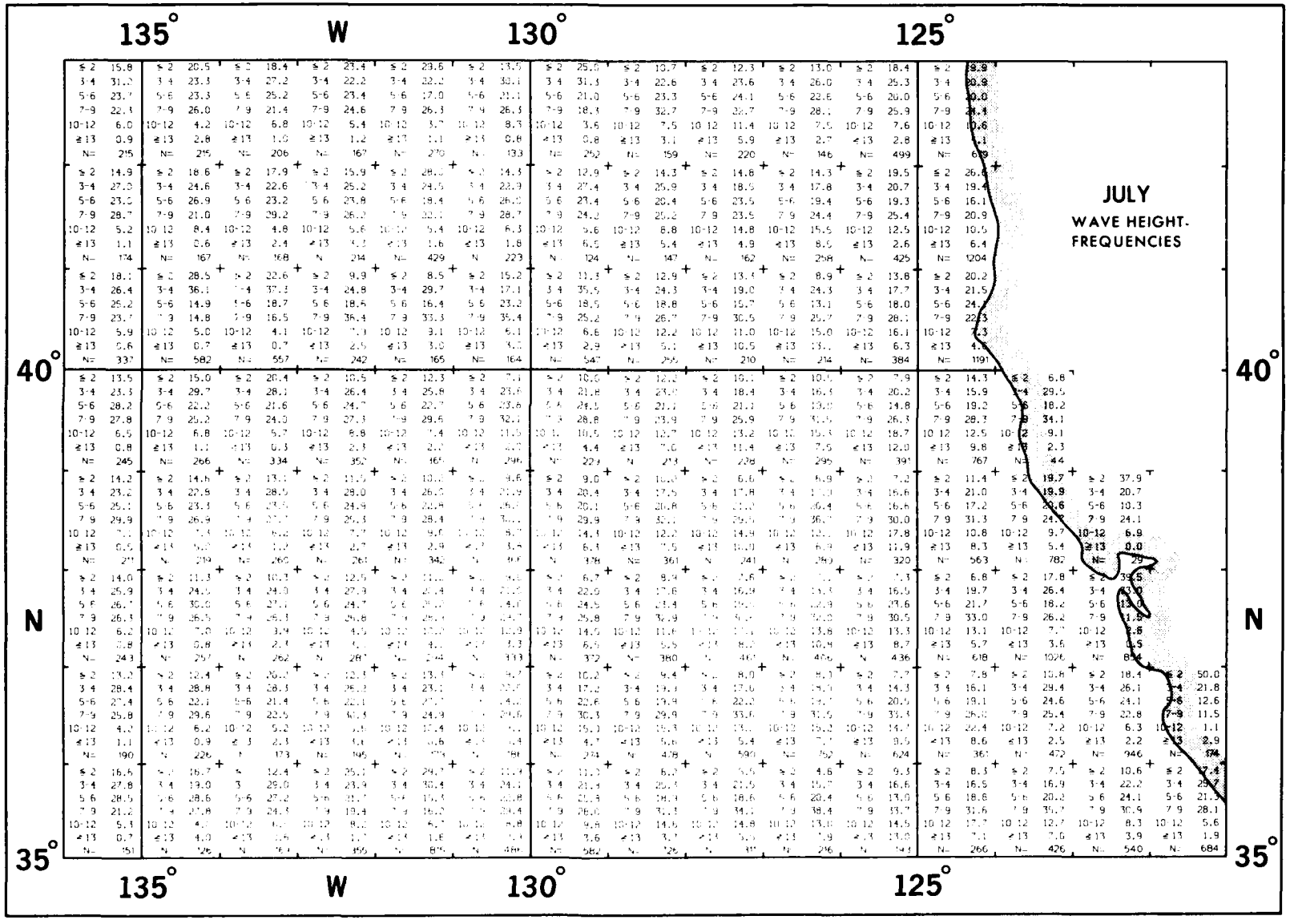

135° W 130° 125°
50°
N
45°
JULY
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS
WERE FROM NORTH.
MEAN SPEED (KNOTS)
IS INDICATED BY THE
PRINTED NUMBER
AT THE END OF
EACH BAR.
MEAN
SCALAR SPEED.
MEAN
SCALAR SPEED
OF ALL OBSERVED
EAST WINDS
WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

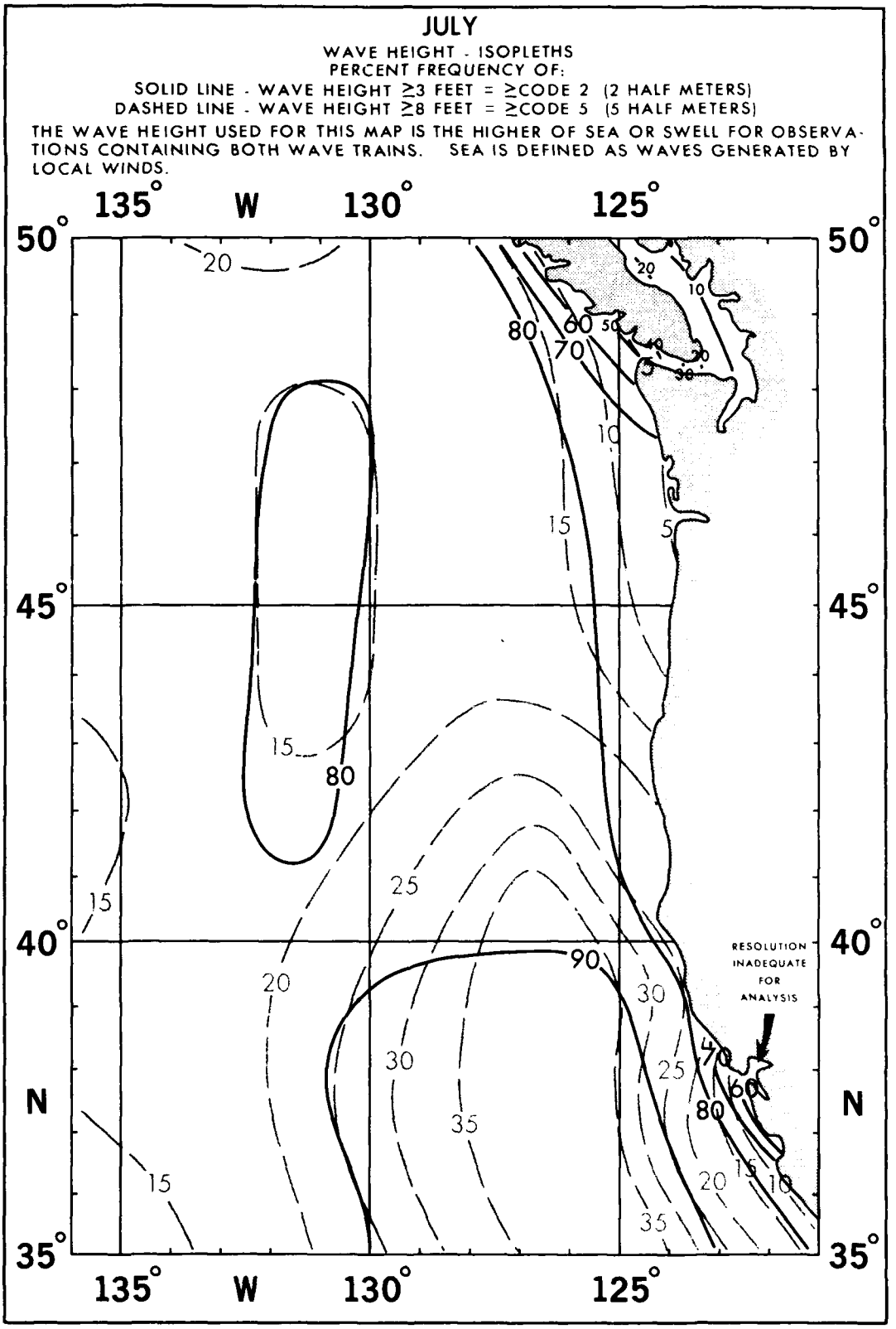

135° W 130° 125°
40°
N
35°
JULY
SURFACE
WIND ROSE

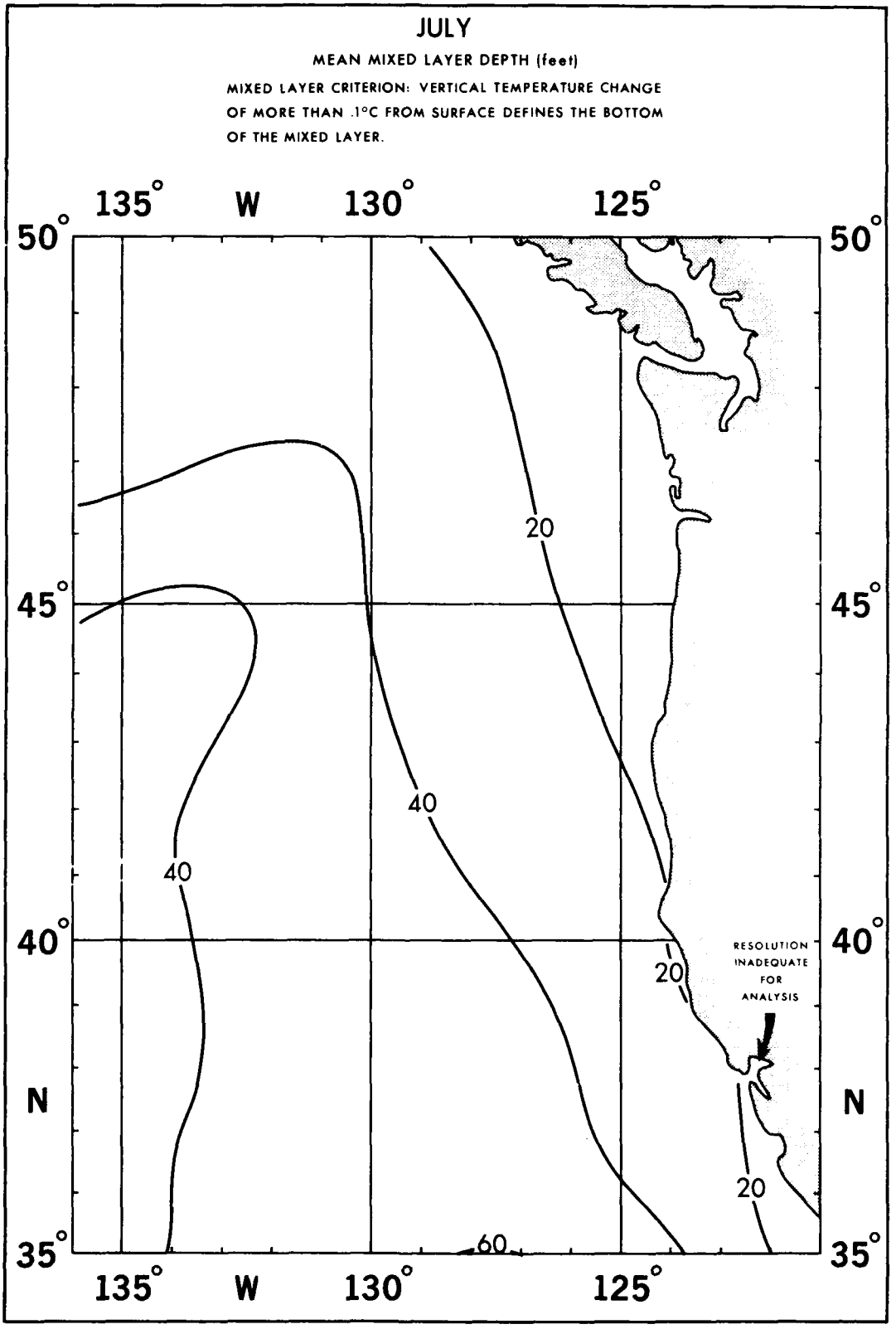

JULY
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
56
57
58
59
60
61
62
63
64
65
66
RESOLUTION INADEQUATE FOR ANALYSIS

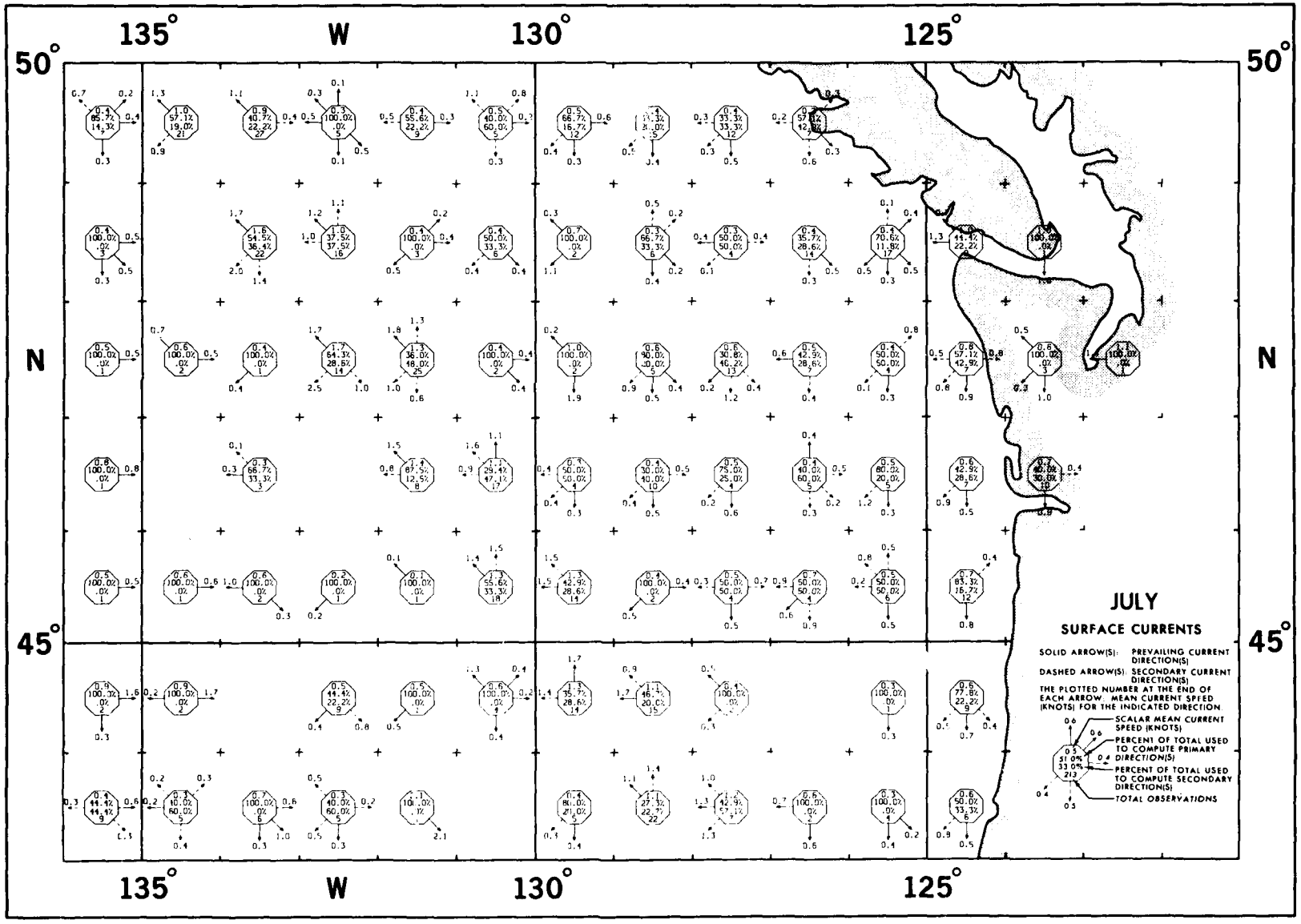

JULY
MEAN SEA SURFACE TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
55
56
57
58
59
60
61
62
63
64
65
66
RESOLUTION INADEQUATE FOR ANALYSIS

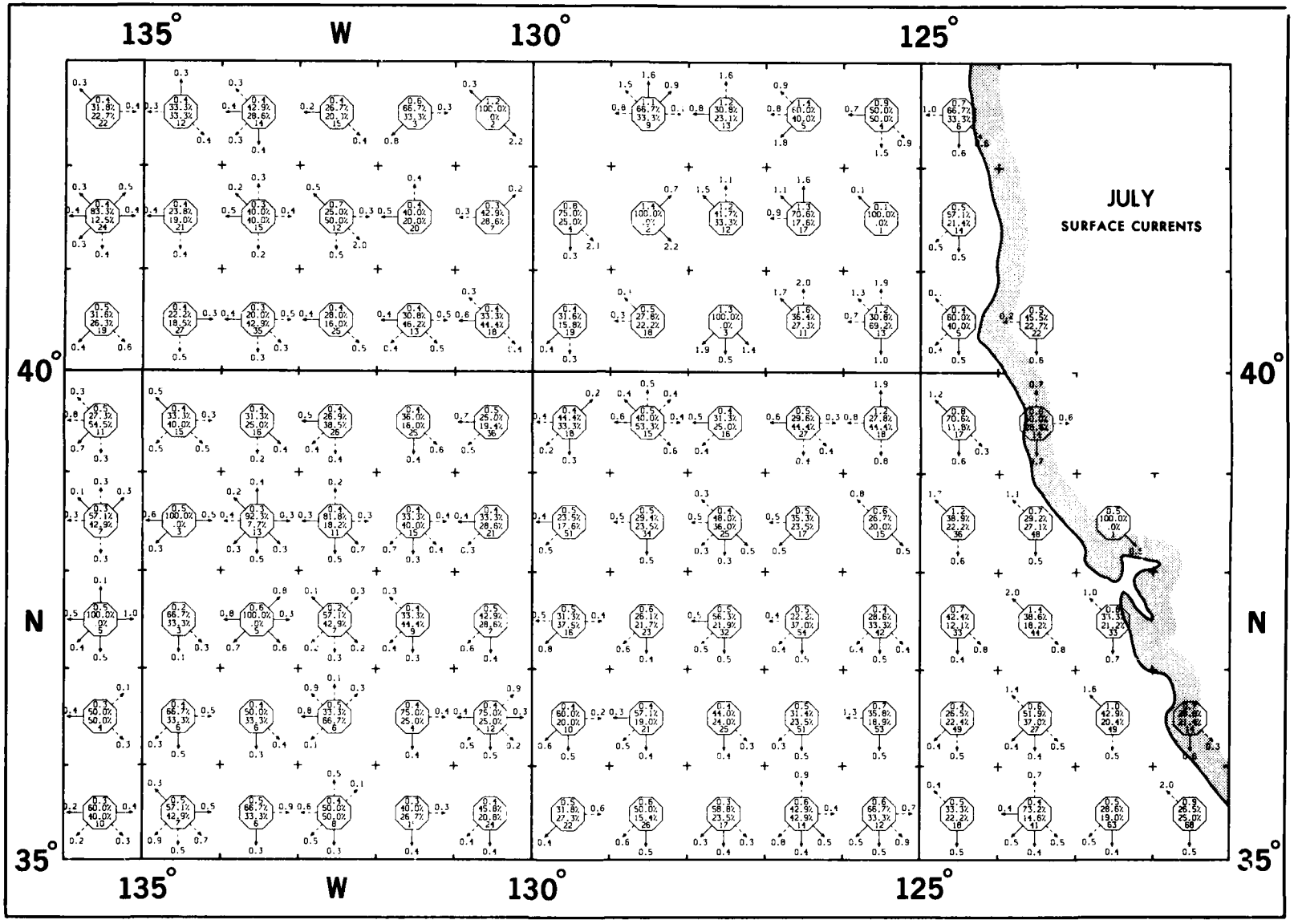

135° W 130° 125°
50°
N
45°
JULY
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

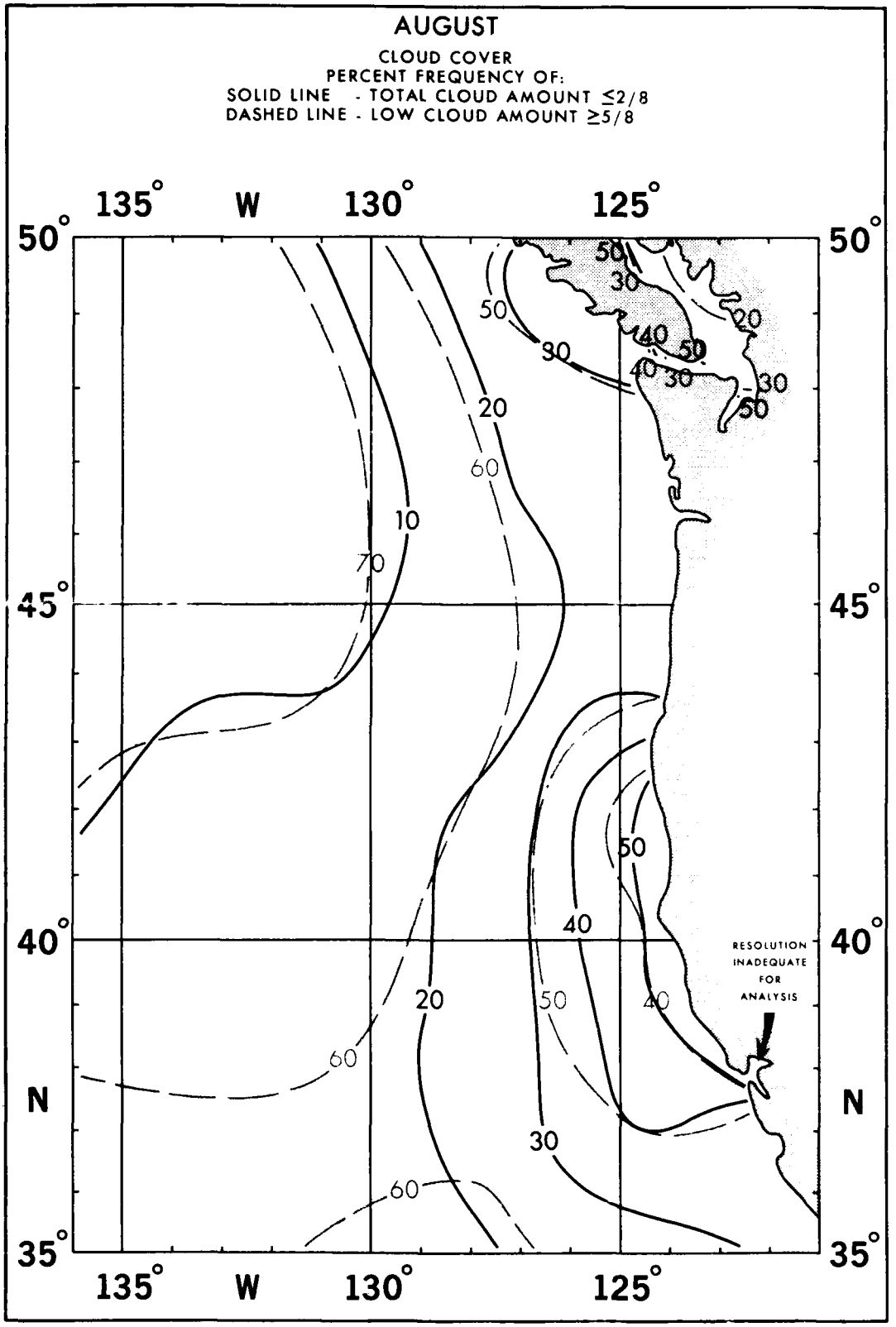

135° W 130° 125°
40°
N
35°
JULY
WAVE HEIGHT-
FREQUENCIES

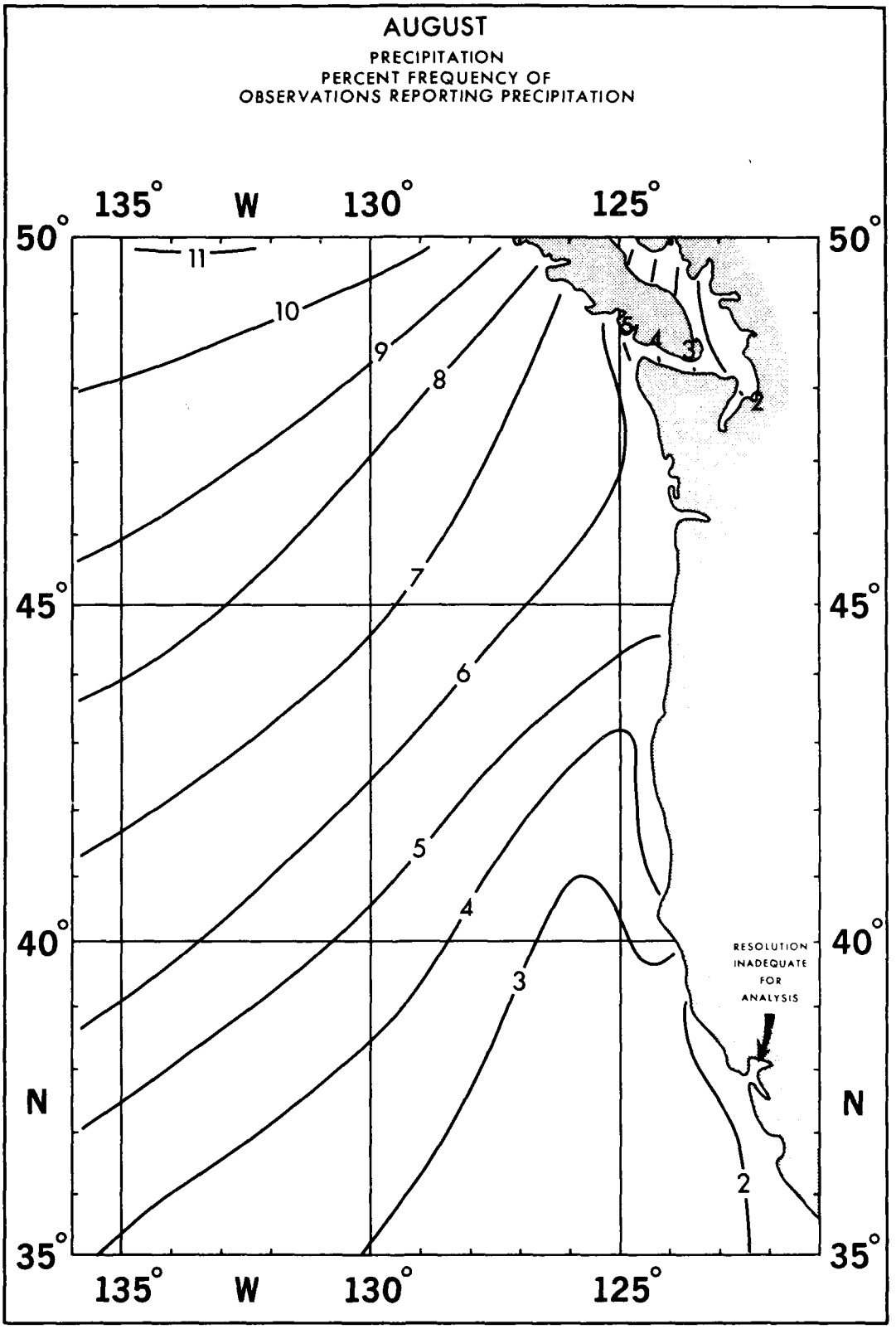

JULY
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

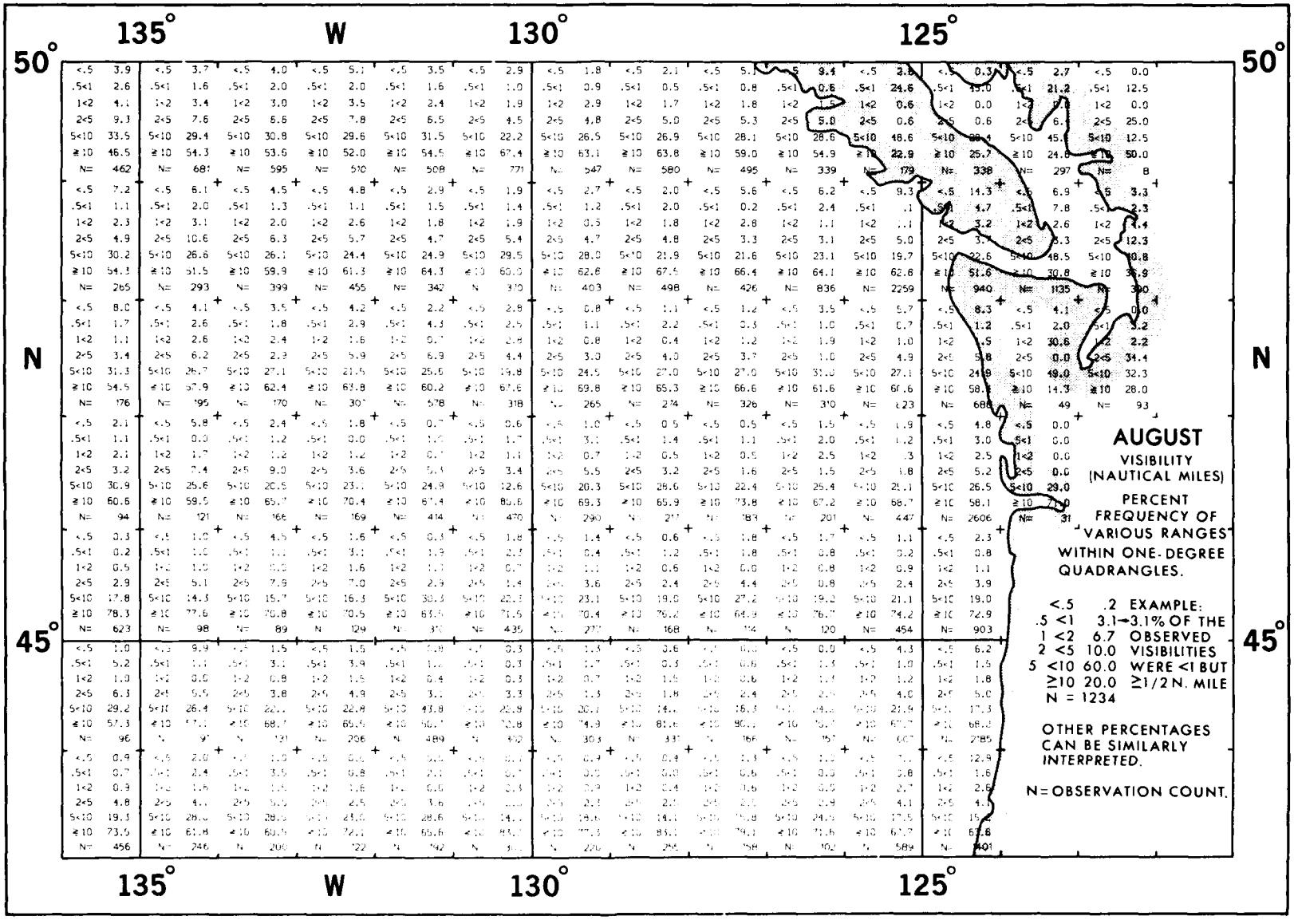

JULY
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W 130° 125°
50°
45°
40°
35°
N
20
40
40
60
20
20
RESOLUTION INADEQUATE FOR ANALYSIS

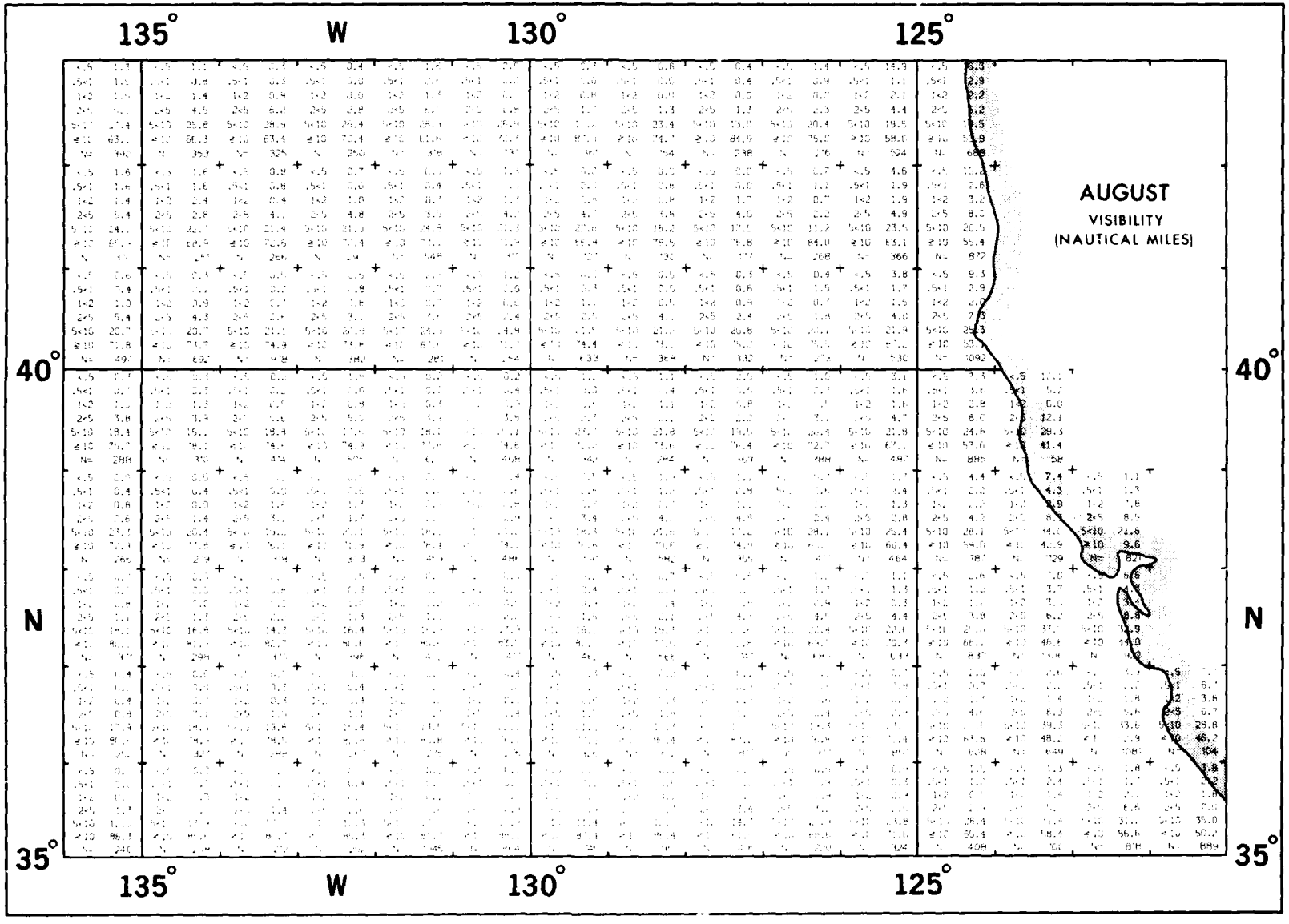

135° W 130° 125°
50°
N
45°
JULY
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

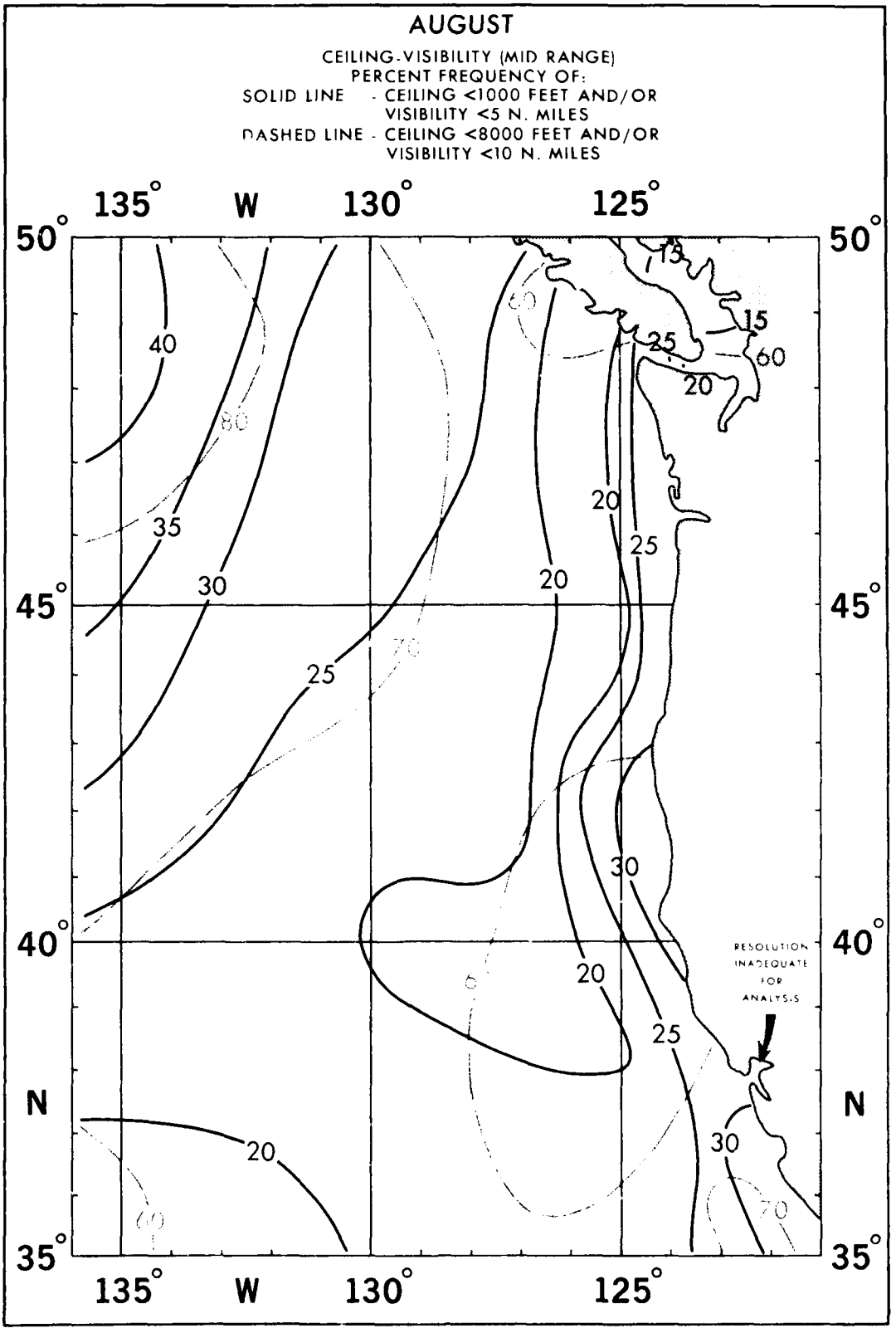

135° W
130°
125°
40°
N
35°
JULY
SURFACE CURRENTS

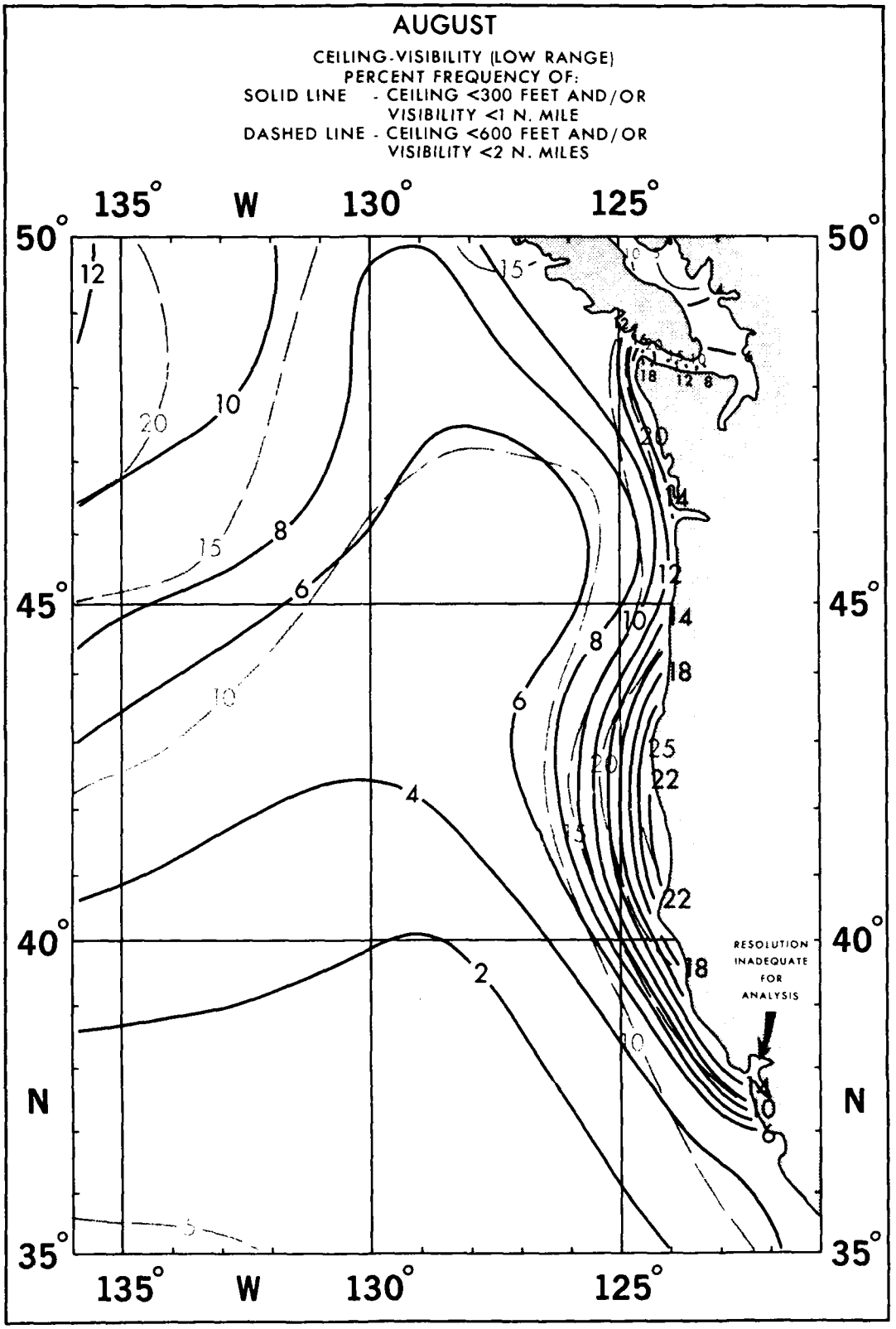

AUGUST
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

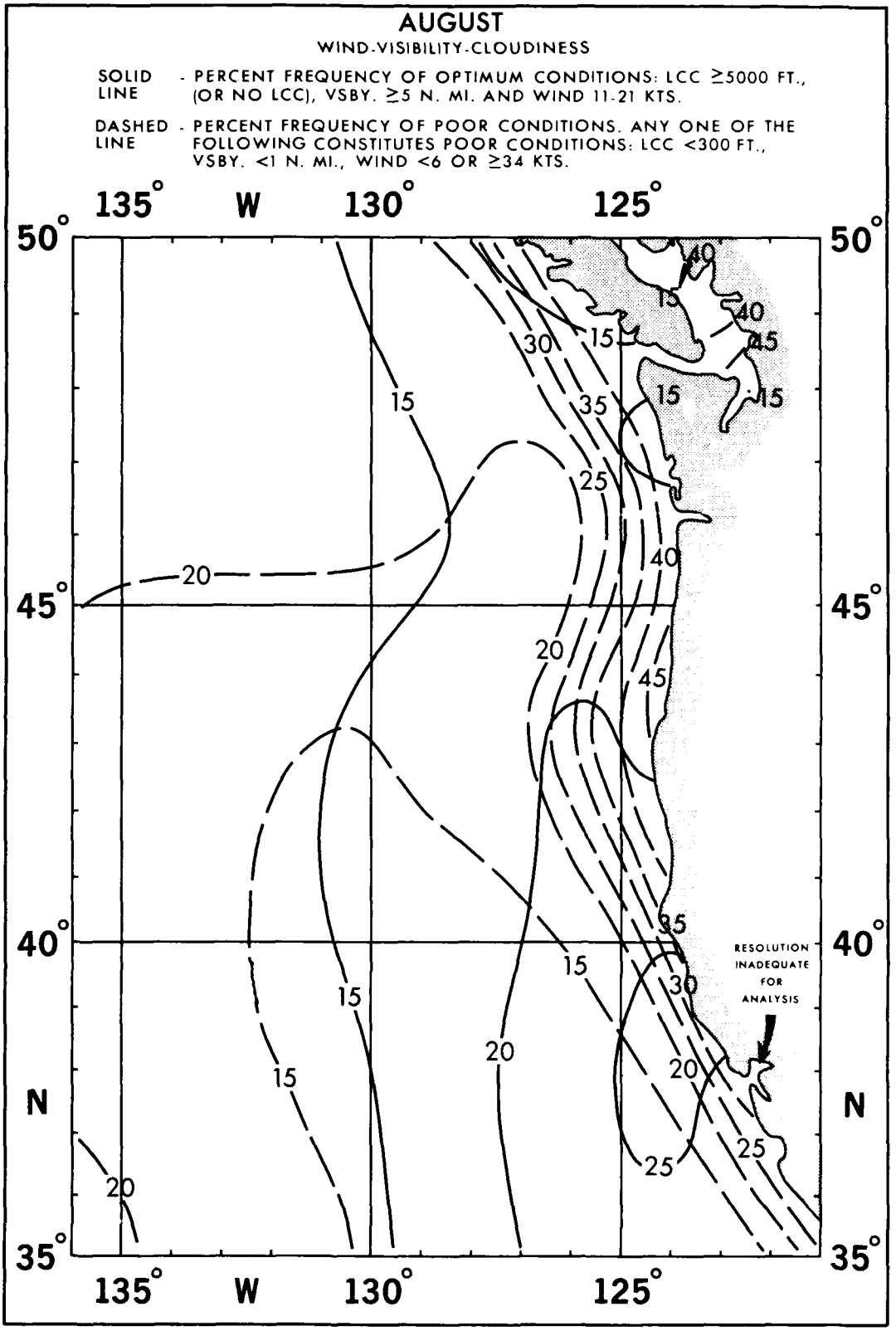

AUGUST
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
11
10
9
8
7
6
5
4
3
2
RESOLUTION INADEQUATE FOR ANALYSIS

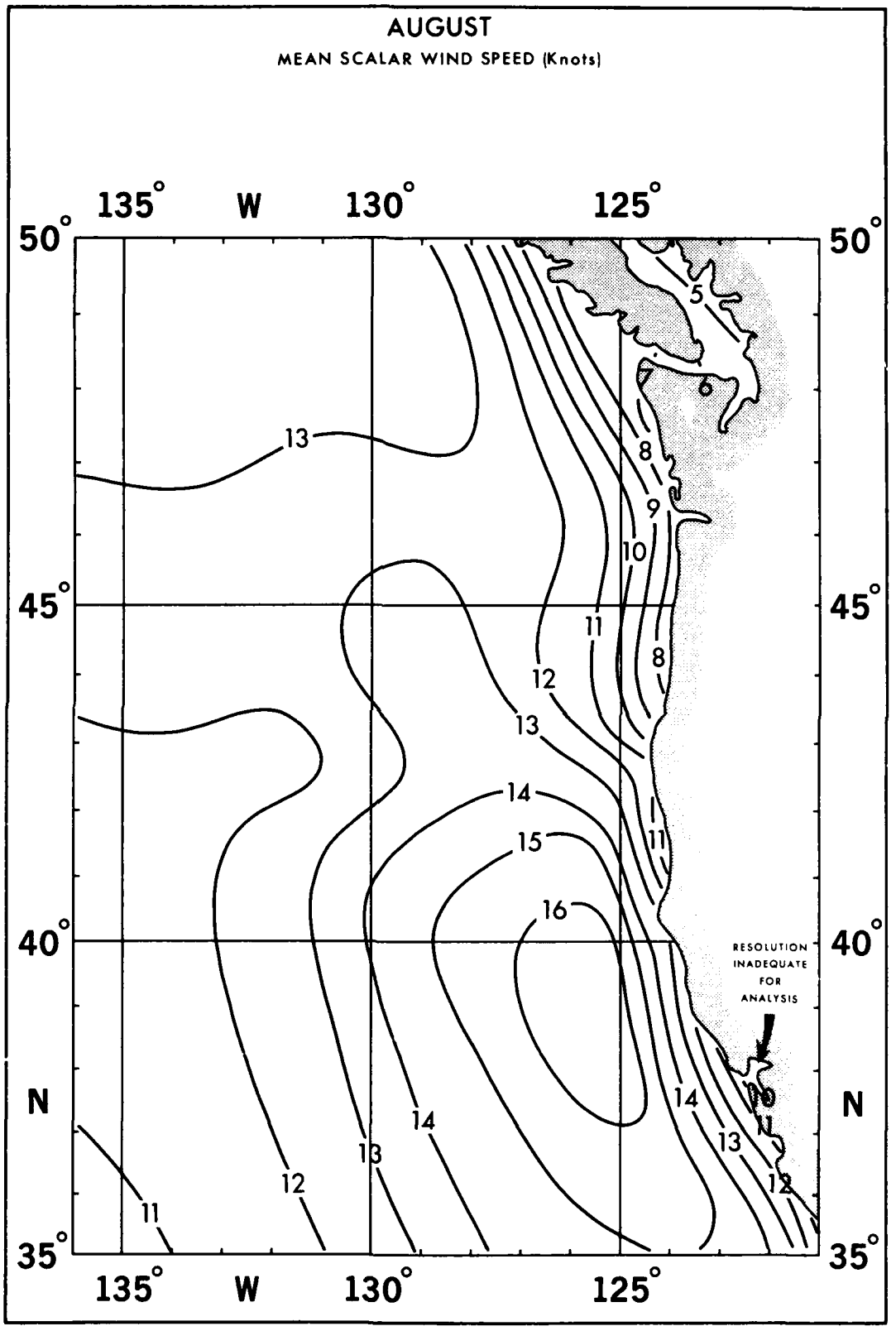

135° W 130° 125°
50°
45°
N
AUGUST
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N=OBSERVATION COUNT.

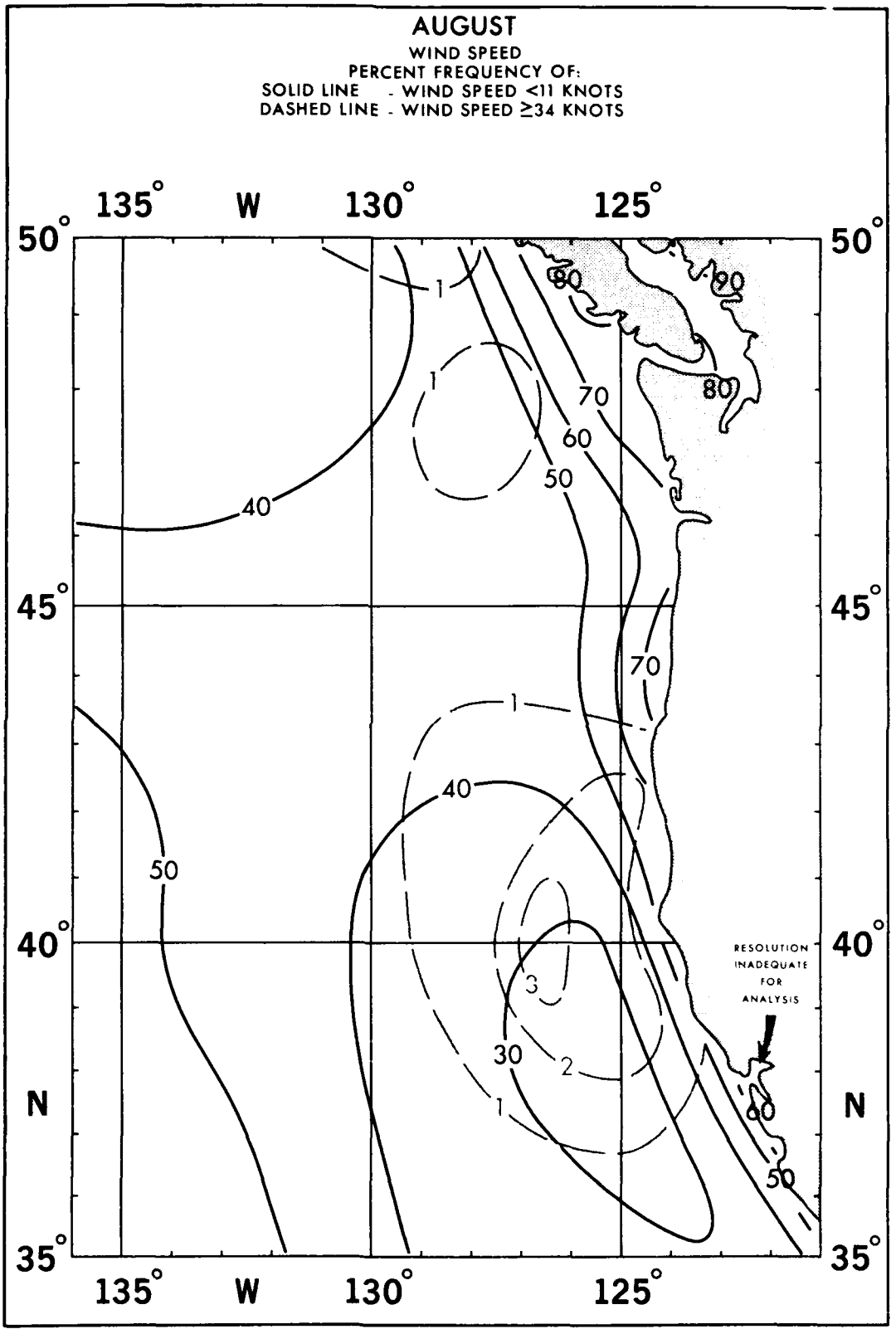

135° W 130° 125°
40°
N
35°
AUGUST
VISIBILITY
(NAUTICAL MILES)

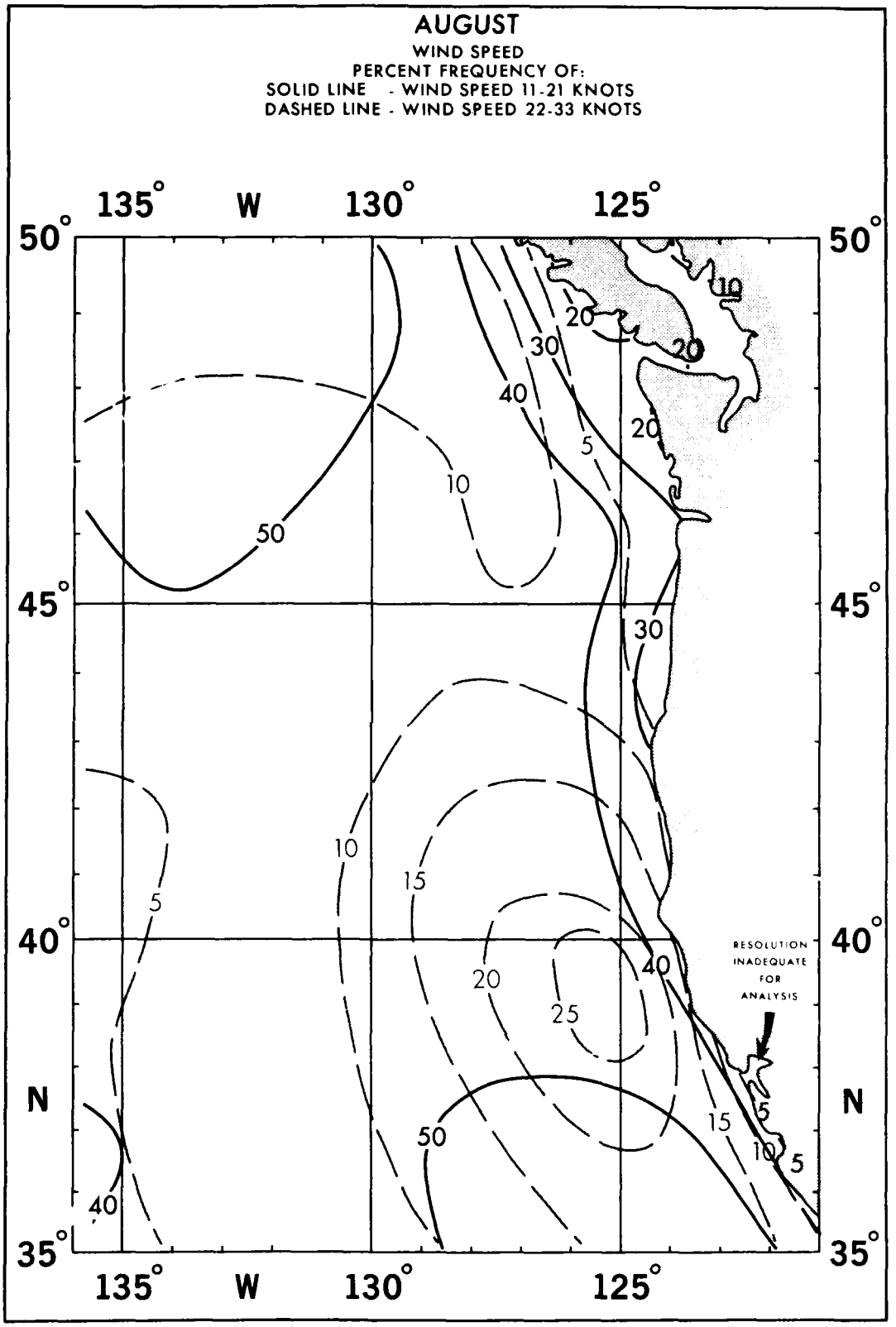

AUGUST
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
15
20
25
30
35
40
60
80

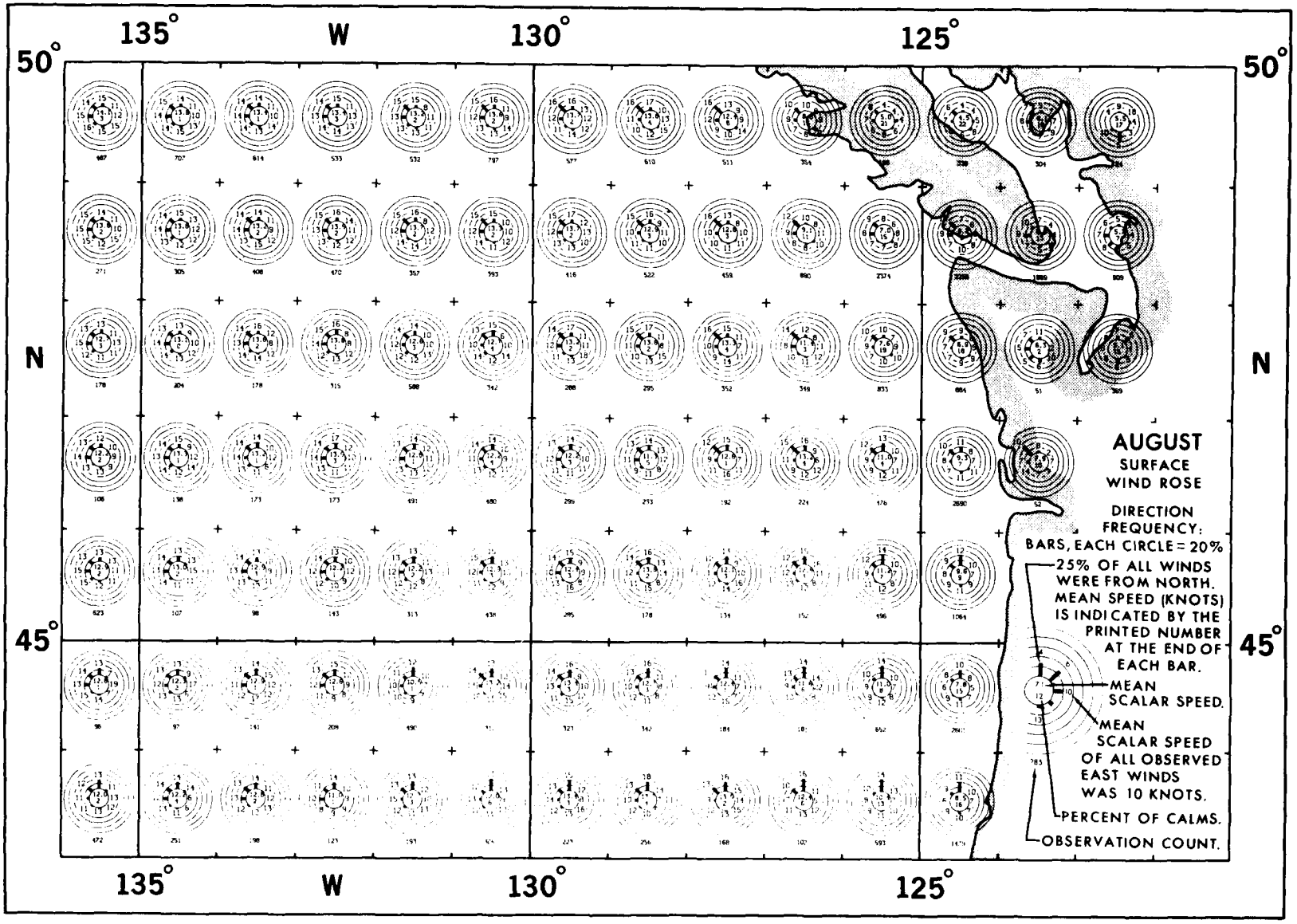

AUGUST
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

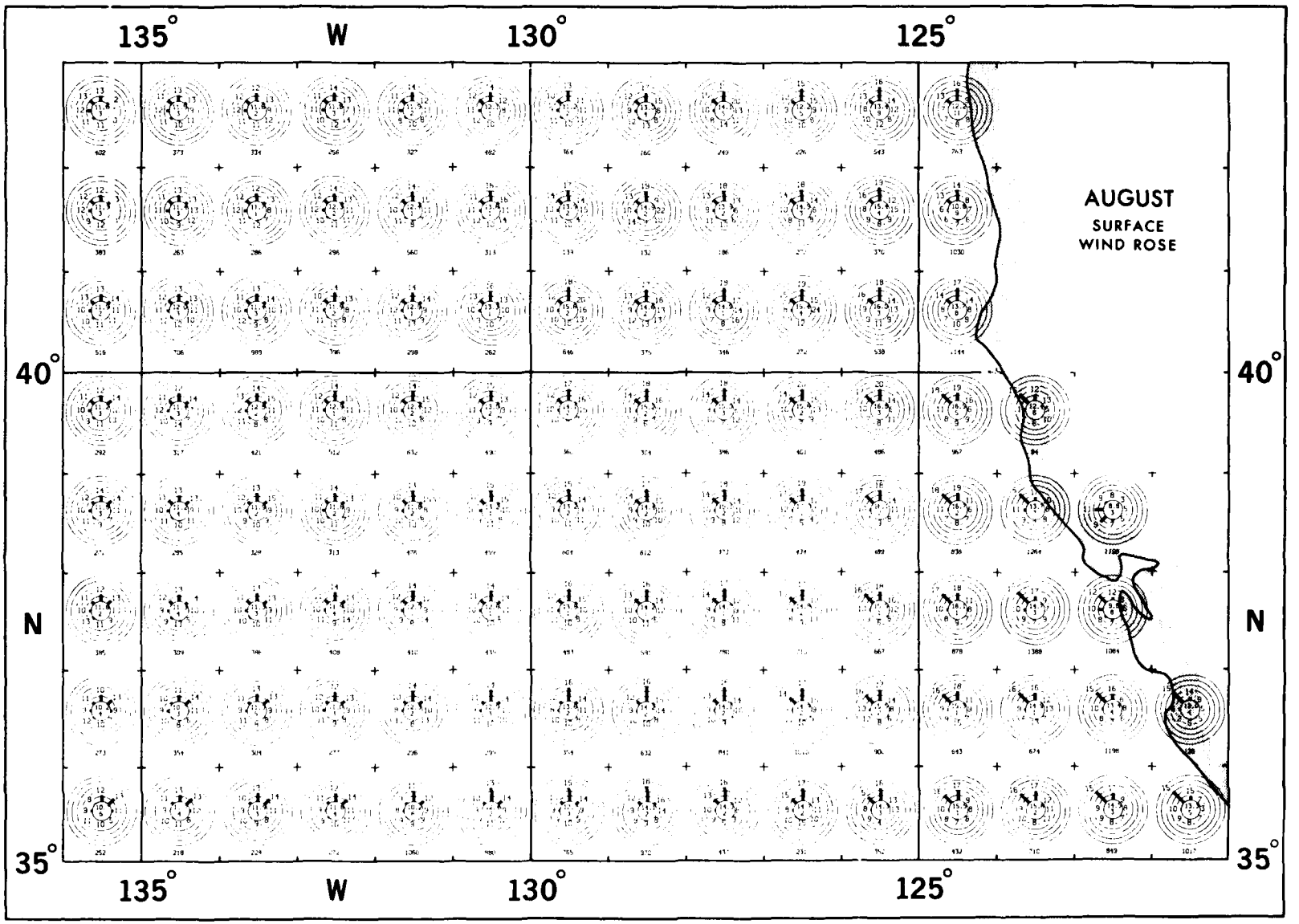

AUGUST
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

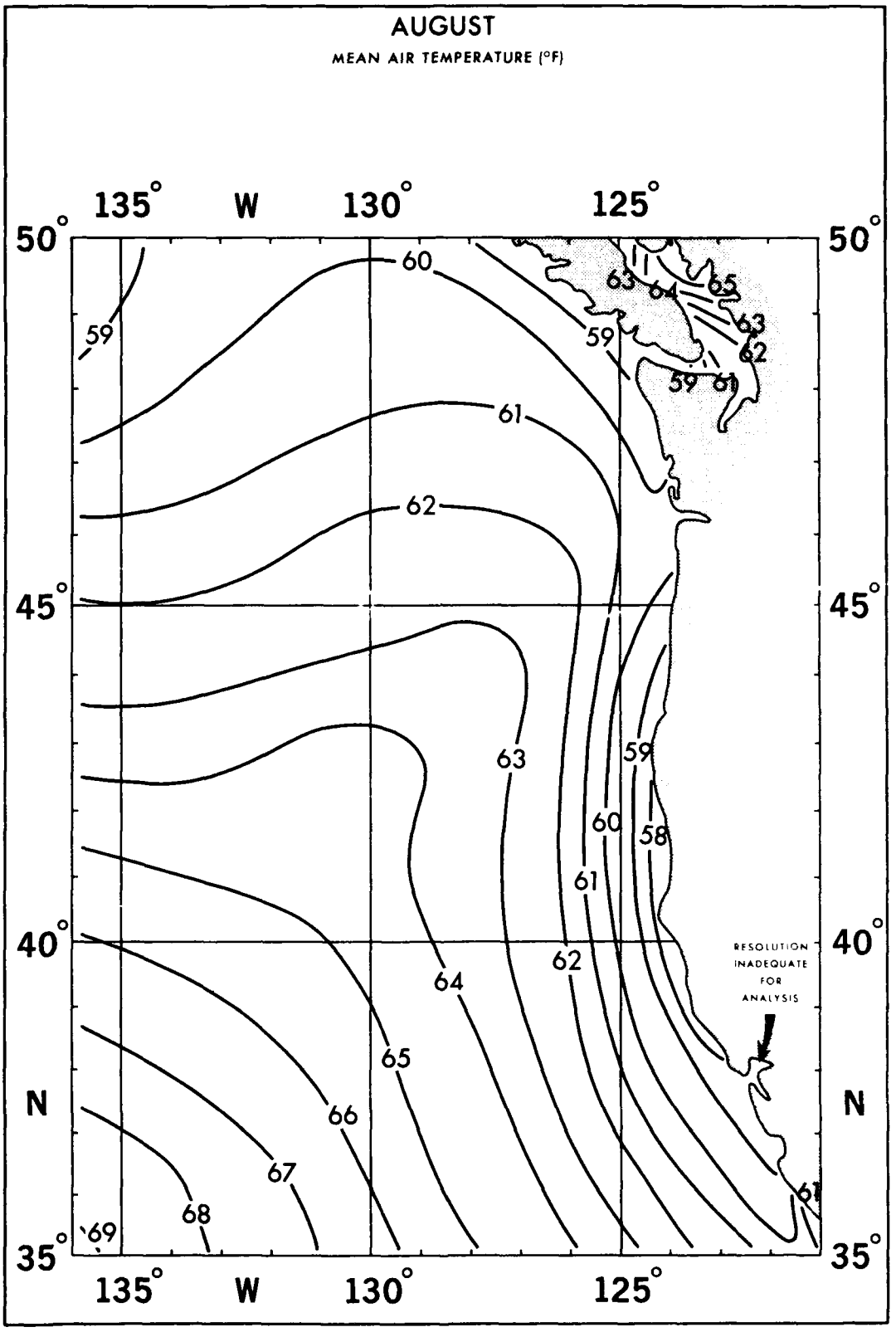

AUGUST
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
N
35°
RESOLUTION INADEQUATE FOR ANALYSIS

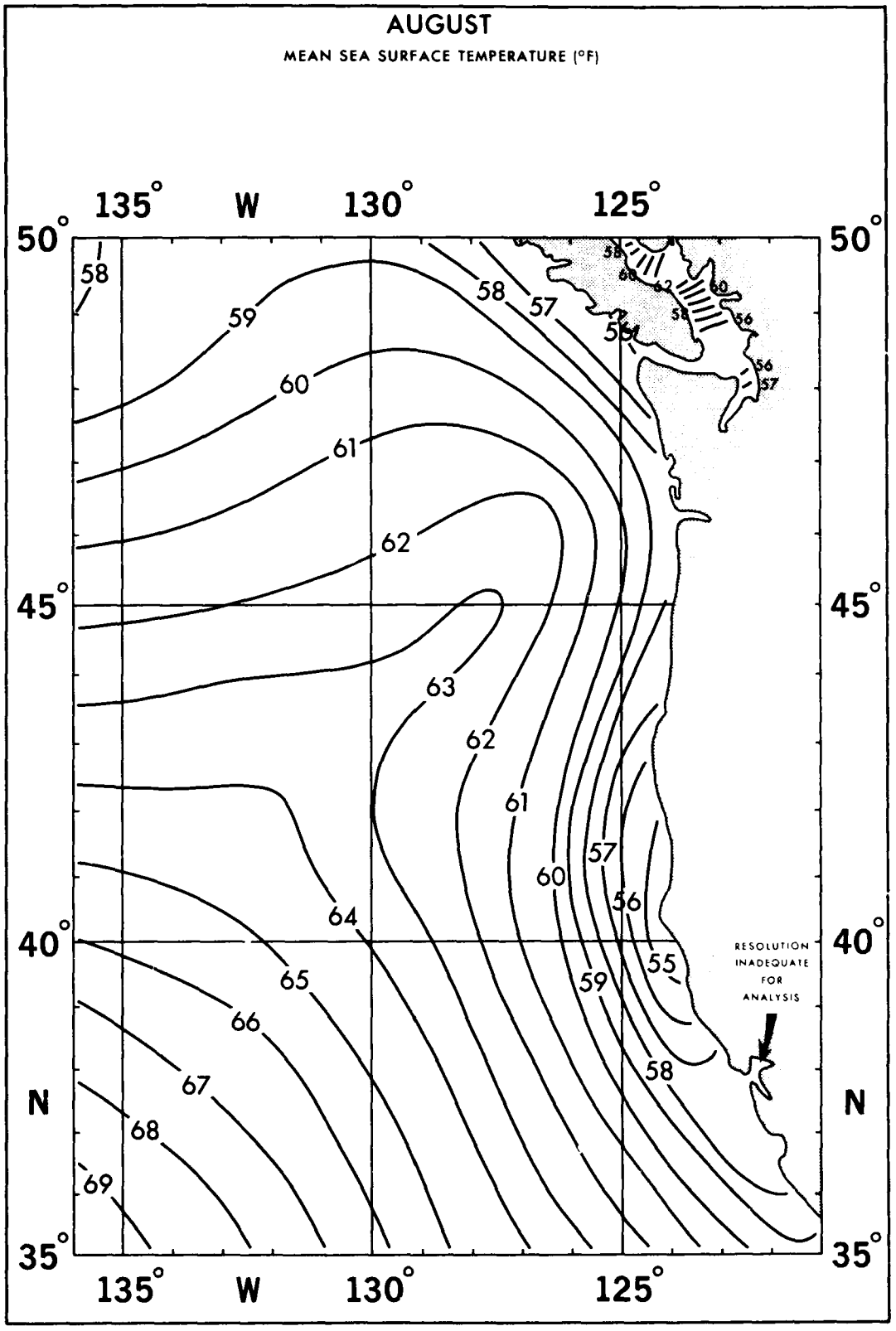

AUGUST
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
1
40
50
60
70
80
90
3
30
2
RESOLUTION INADEQUATE FOR ANALYSIS

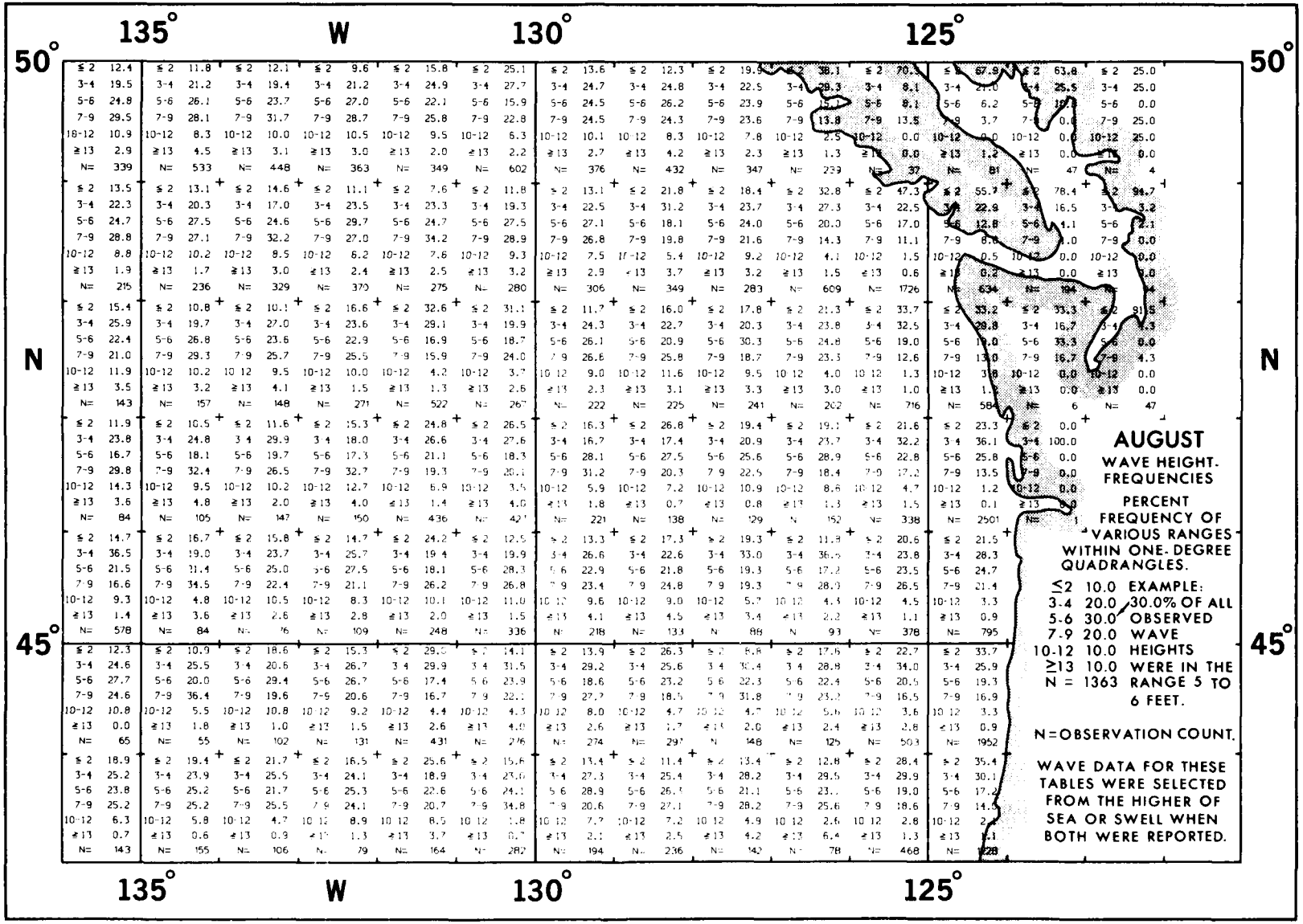

AUGUST
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

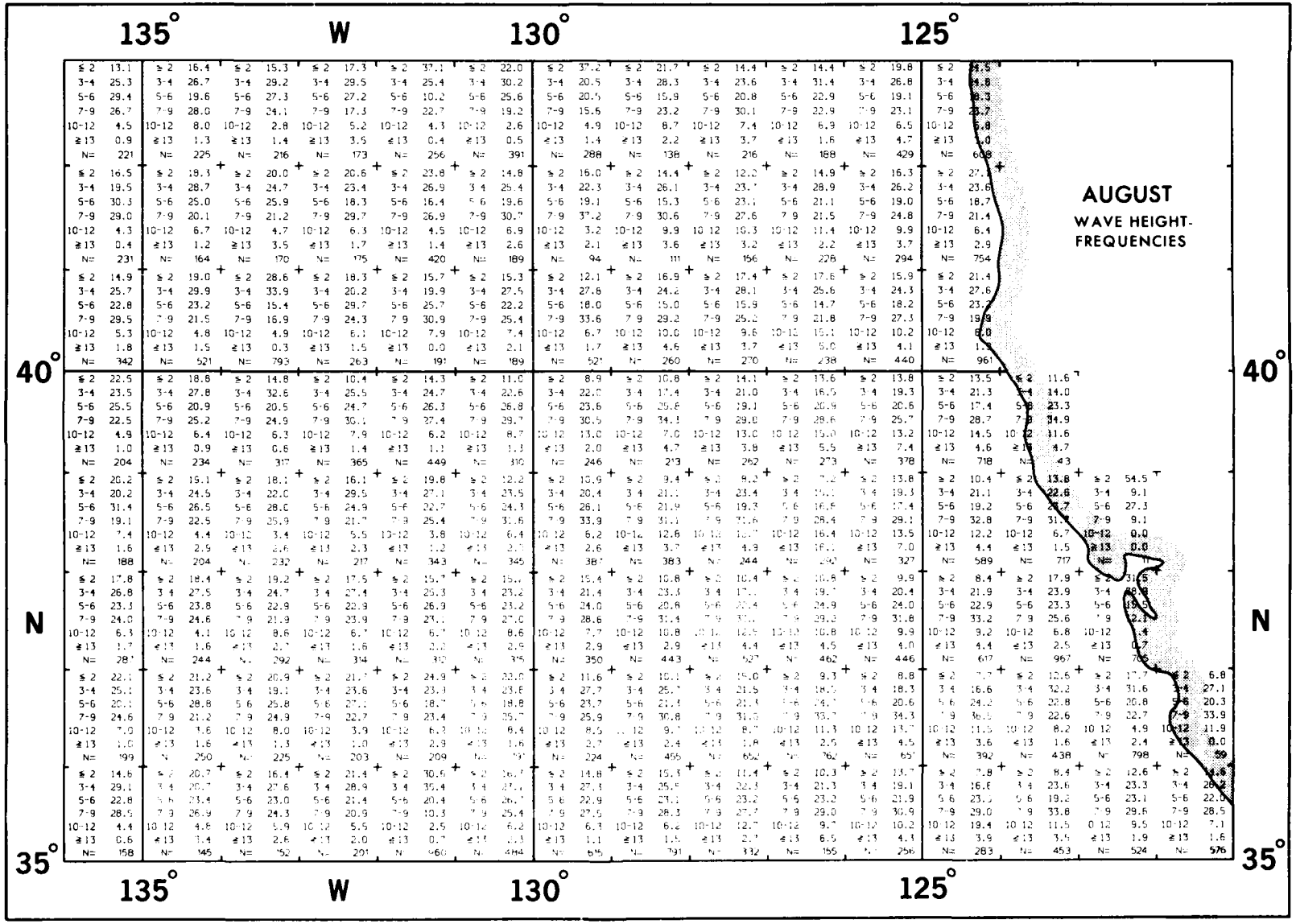

135° W 130° 125°
50°
N
45°
AUGUST
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS
WERE FROM NORTH.
MEAN SPEED (KNOTS)
IS INDICATED BY THE
PRINTED NUMBER
AT THE END OF
EACH BAR.
MEAN
SCALAR SPEED.
MEAN
SCALAR SPEED
OF ALL OBSERVED
EAST WINDS
WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.


135° W 130° 125°
AUGUST
SURFACE
WIND ROSE
40° N
35°
135° W 130° 125°


AUGUST
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
59
60
61
62
63
64
65
66
67
68
69
58
RESOLUTION INADEQUATE FOR ANALYSIS


AUGUST
MEAN SEA SURFACE TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
58
59
60
61
62
63
64
65
66
67
68
69
57
56
55
RESOLUTION INADEQUATE FOR ANALYSIS

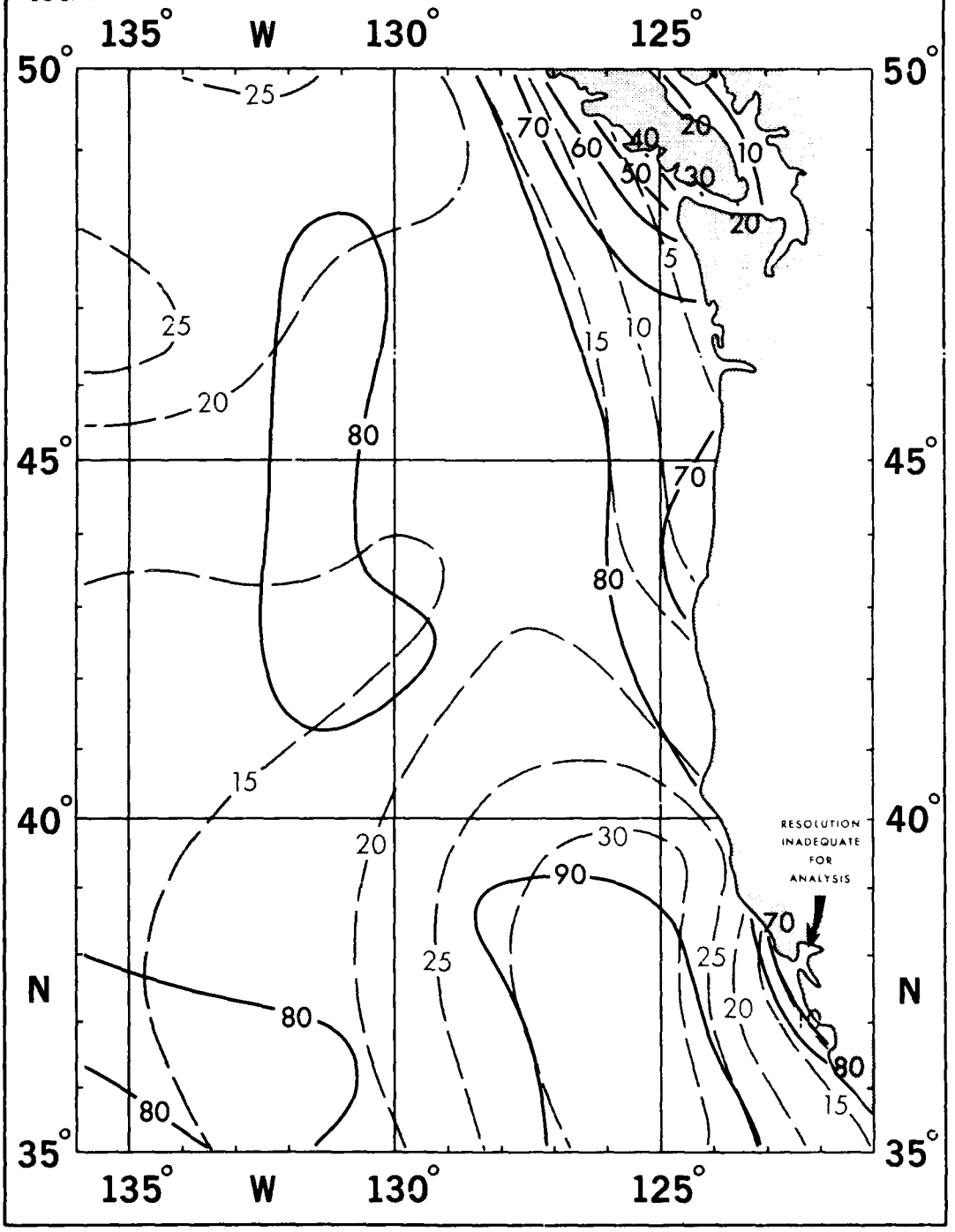

135° W 130° 125°
50°
N
45°
AUGUST
WAVE HEIGHT. FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

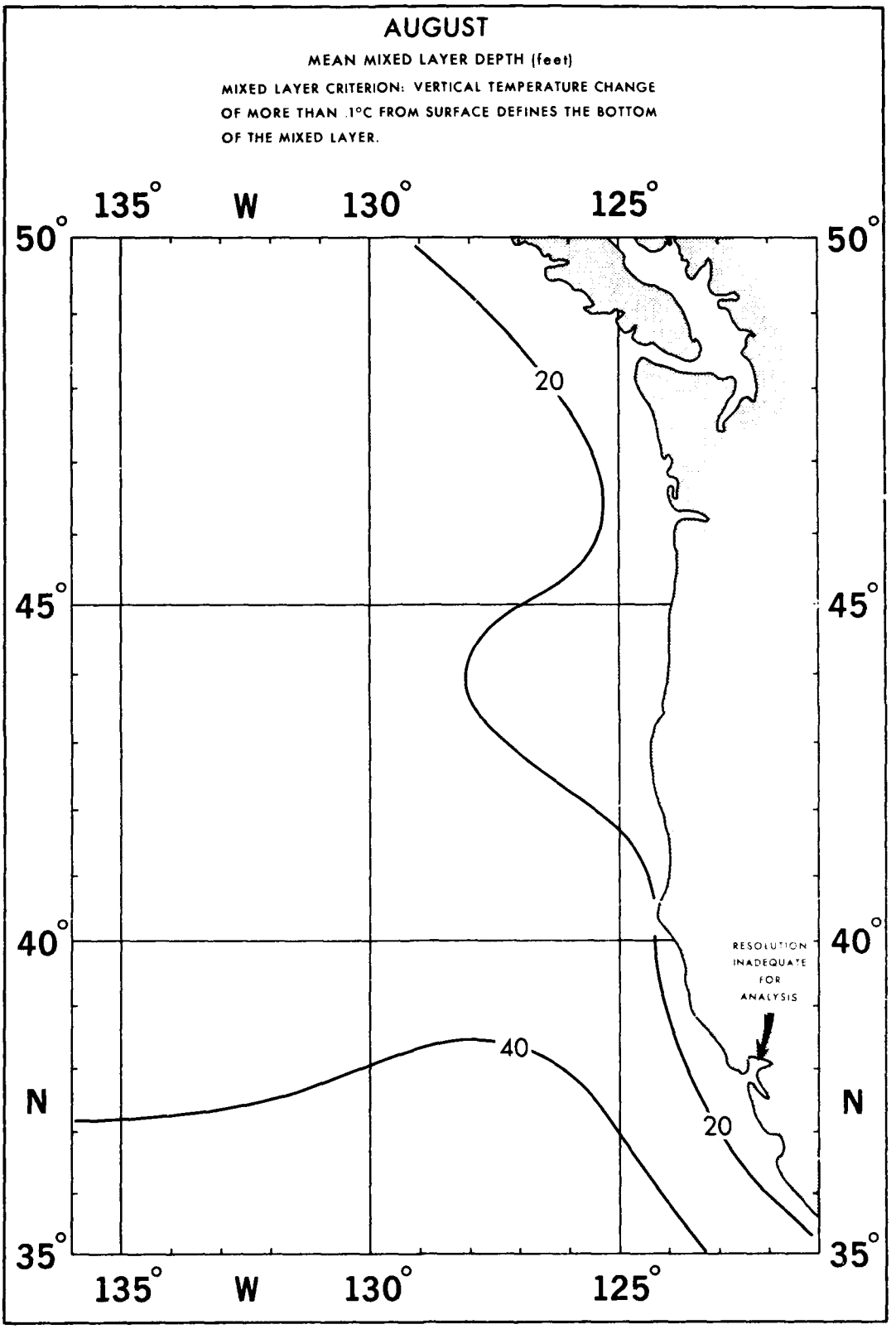

135° W 130° 125°
40°
35°
N
AUGUST
WAVE HEIGHT-
FREQUENCIES

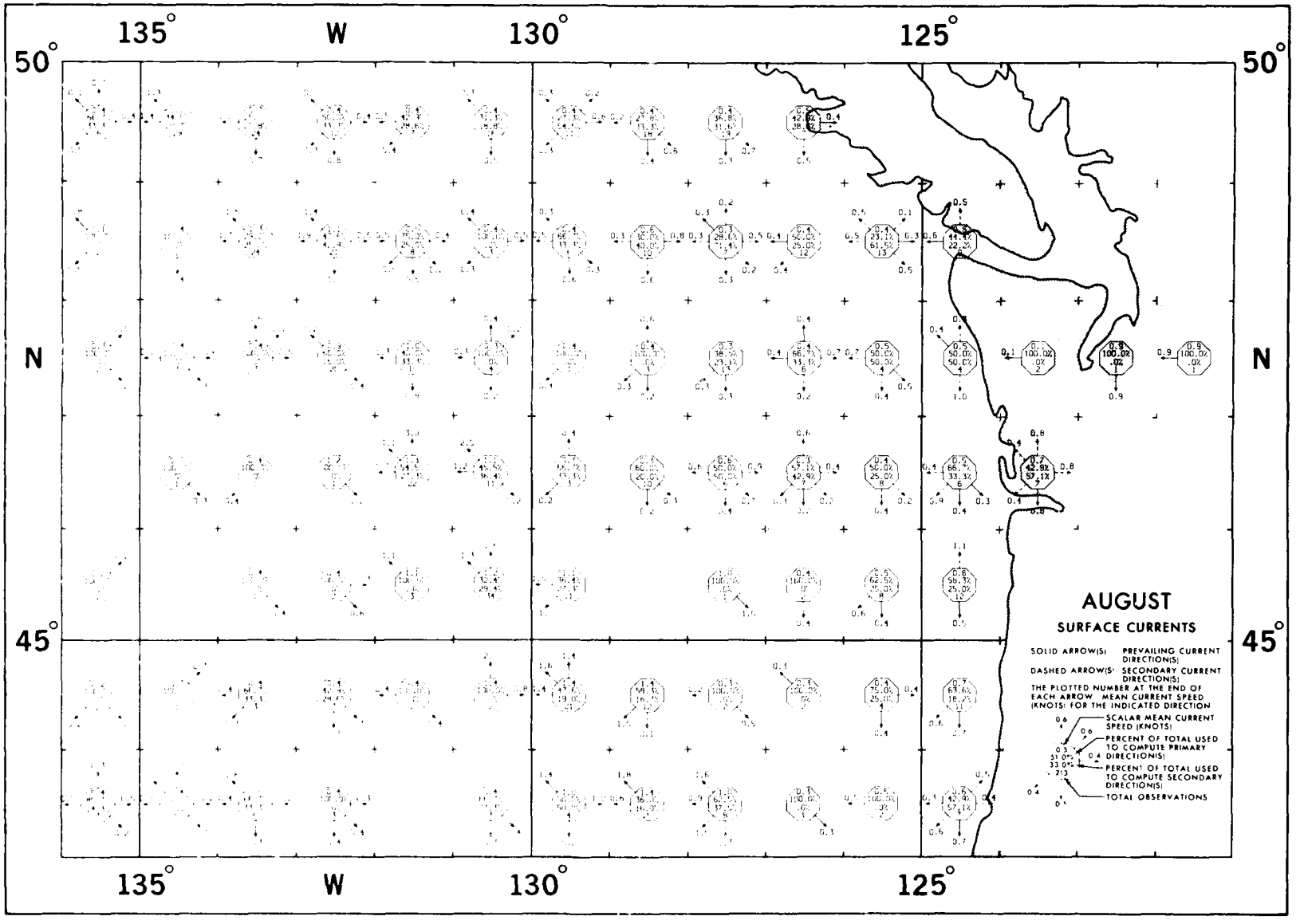
AUGUST

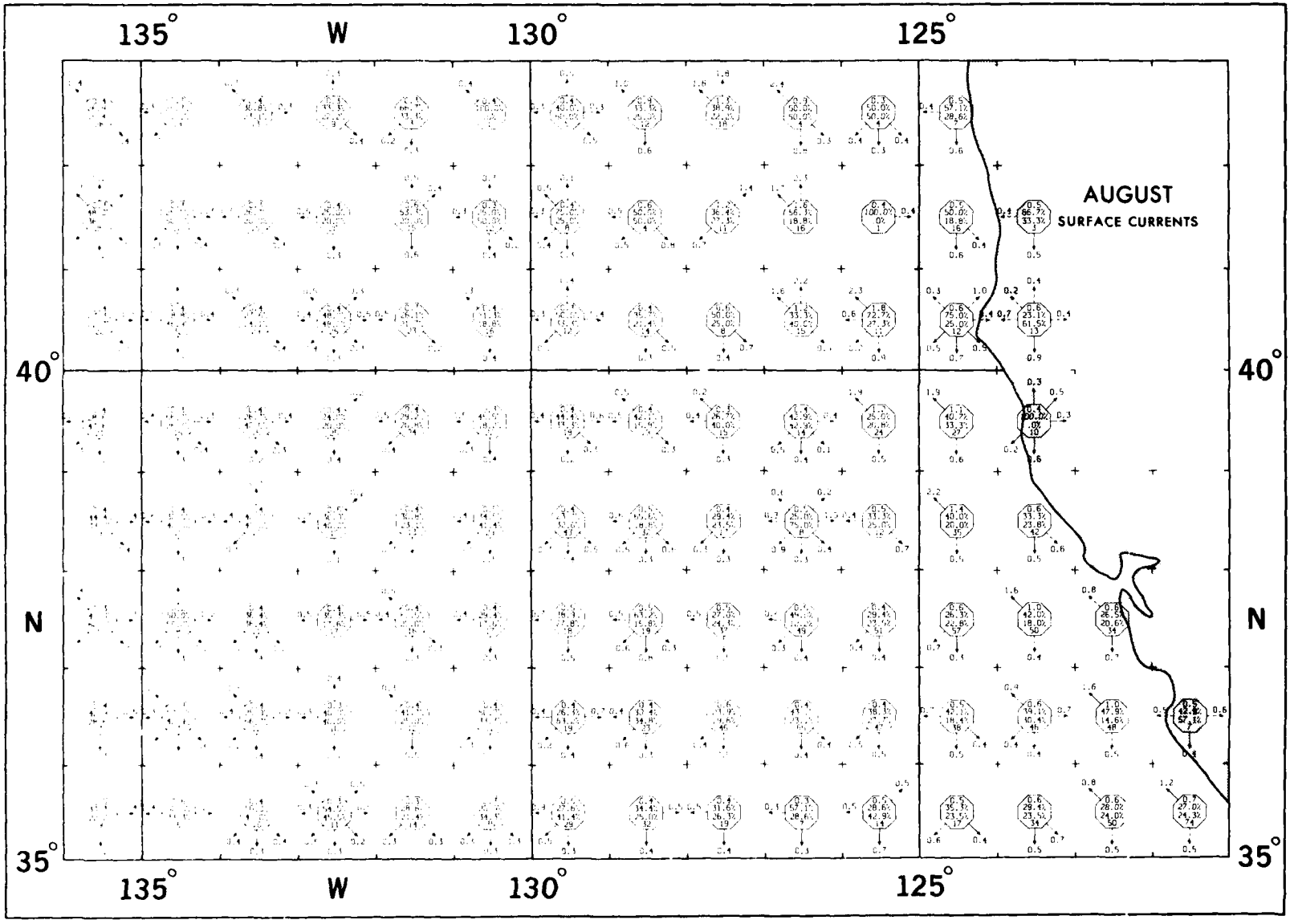
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)

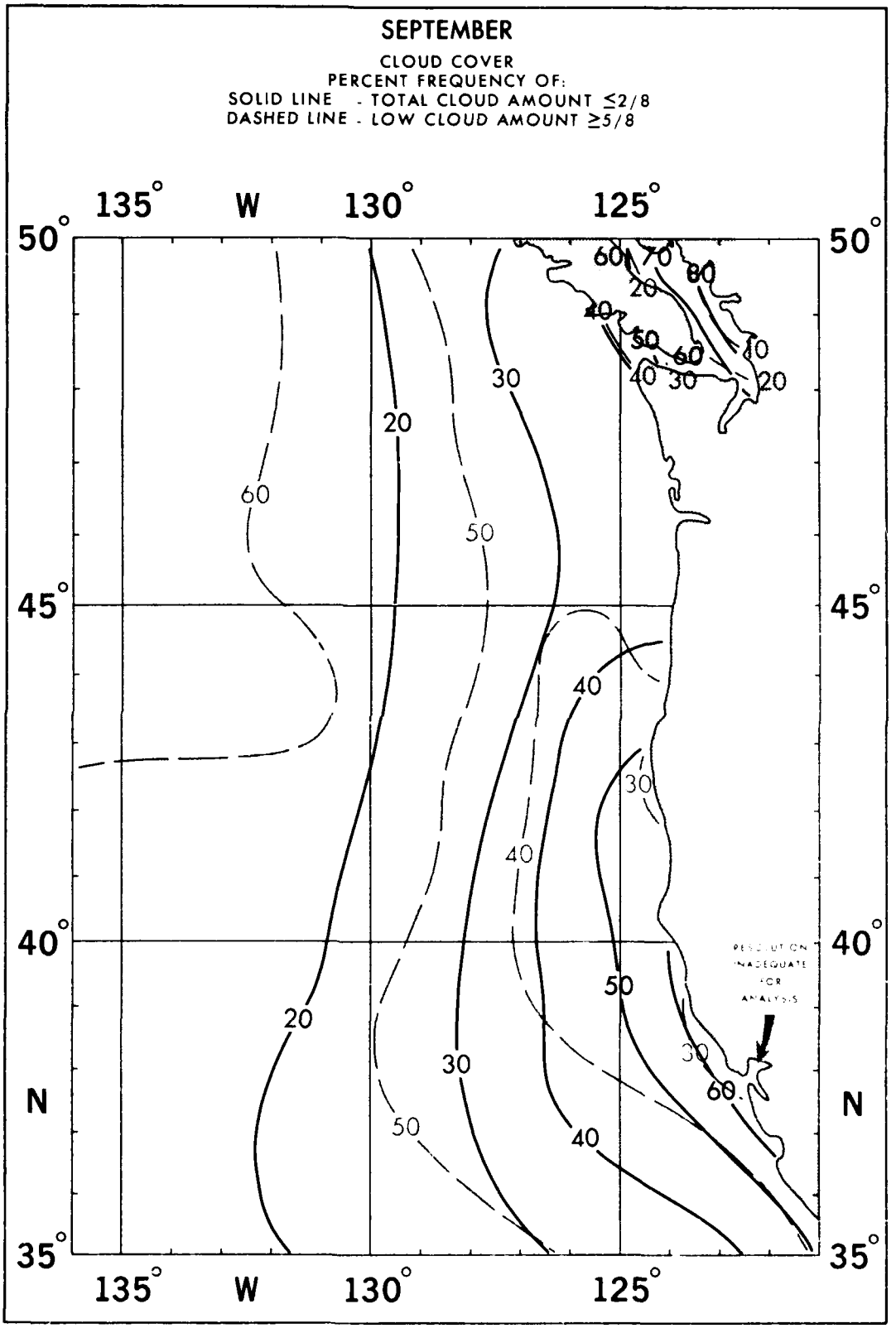
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.

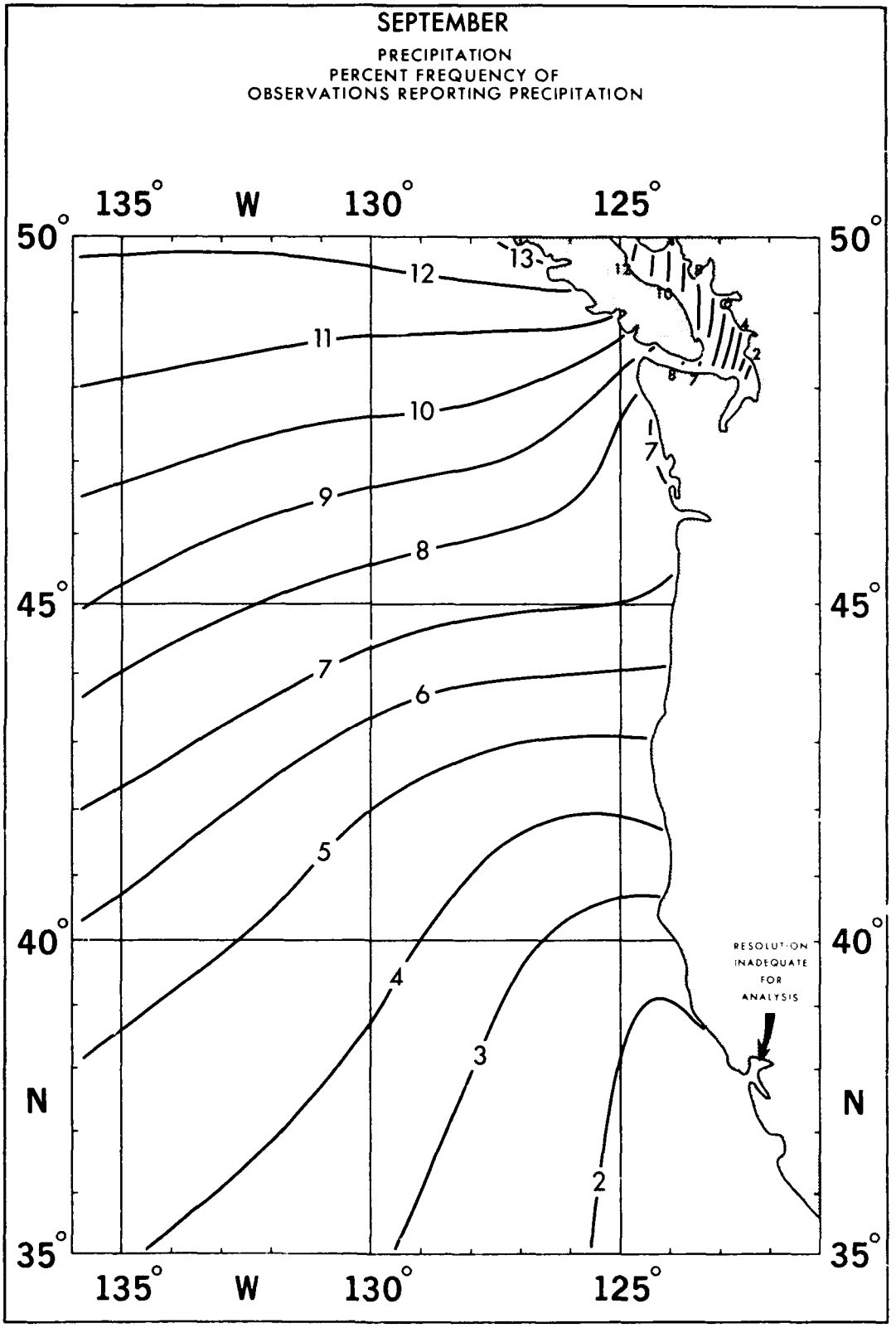


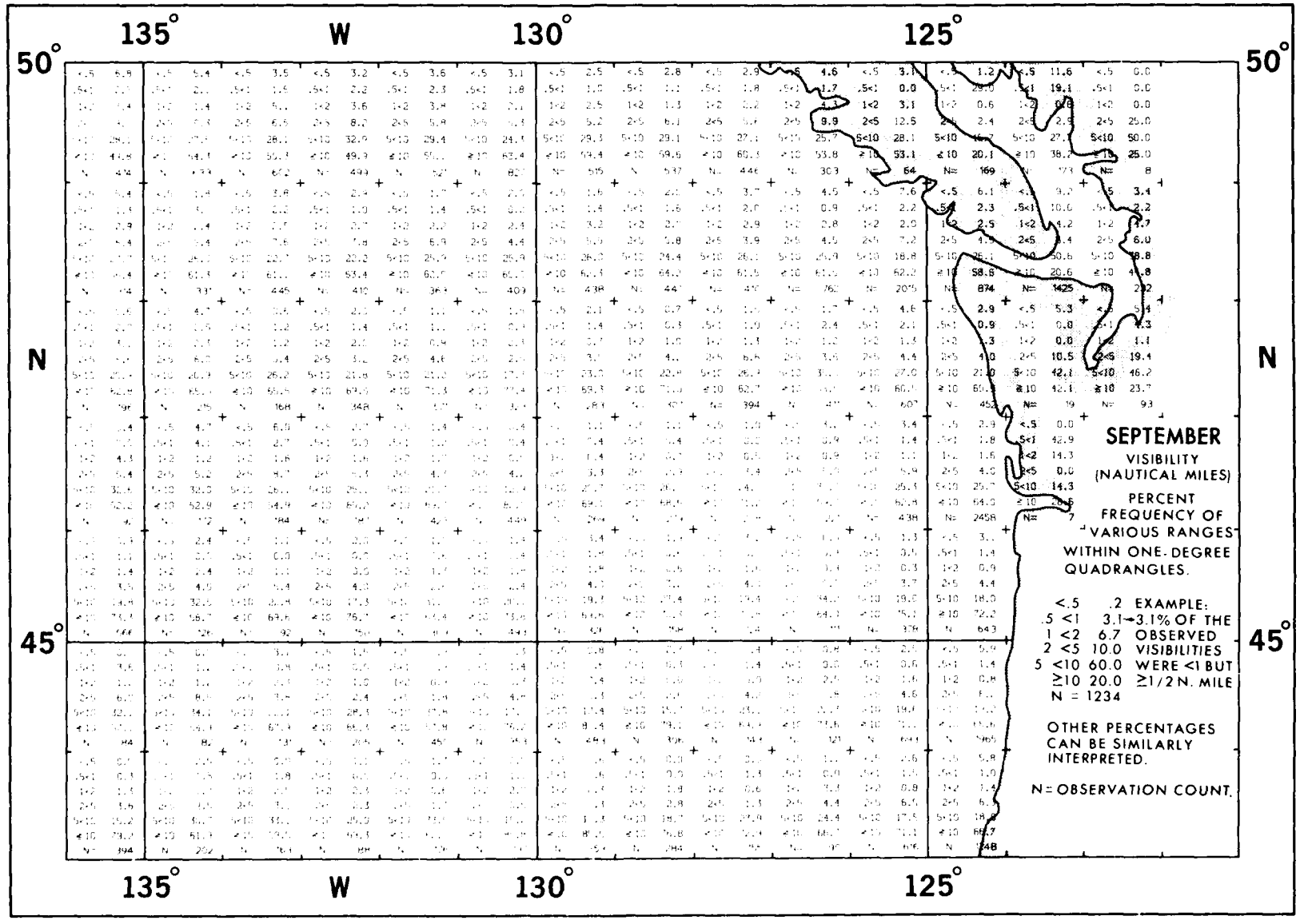

AUGUST
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W 130° 125°
50°
45°
40°
35°
N
20
40
20
RESOLUTION INADEQUATE FOR ANALYSIS

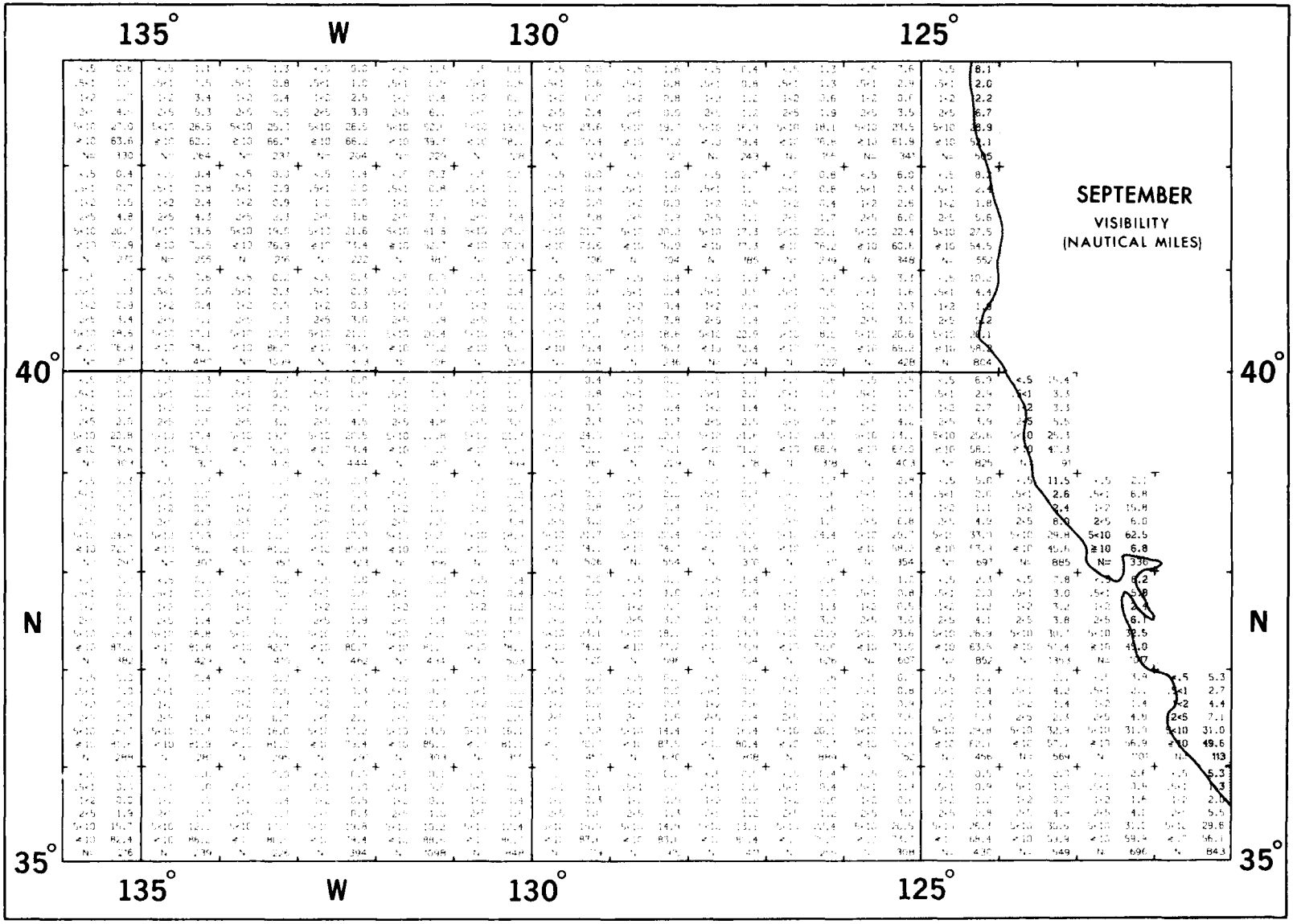

135° W 130° 125°
50°
45°
N
AUGUST
SURFACE CURRENTS
SOLID ARROW(S) PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S) SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

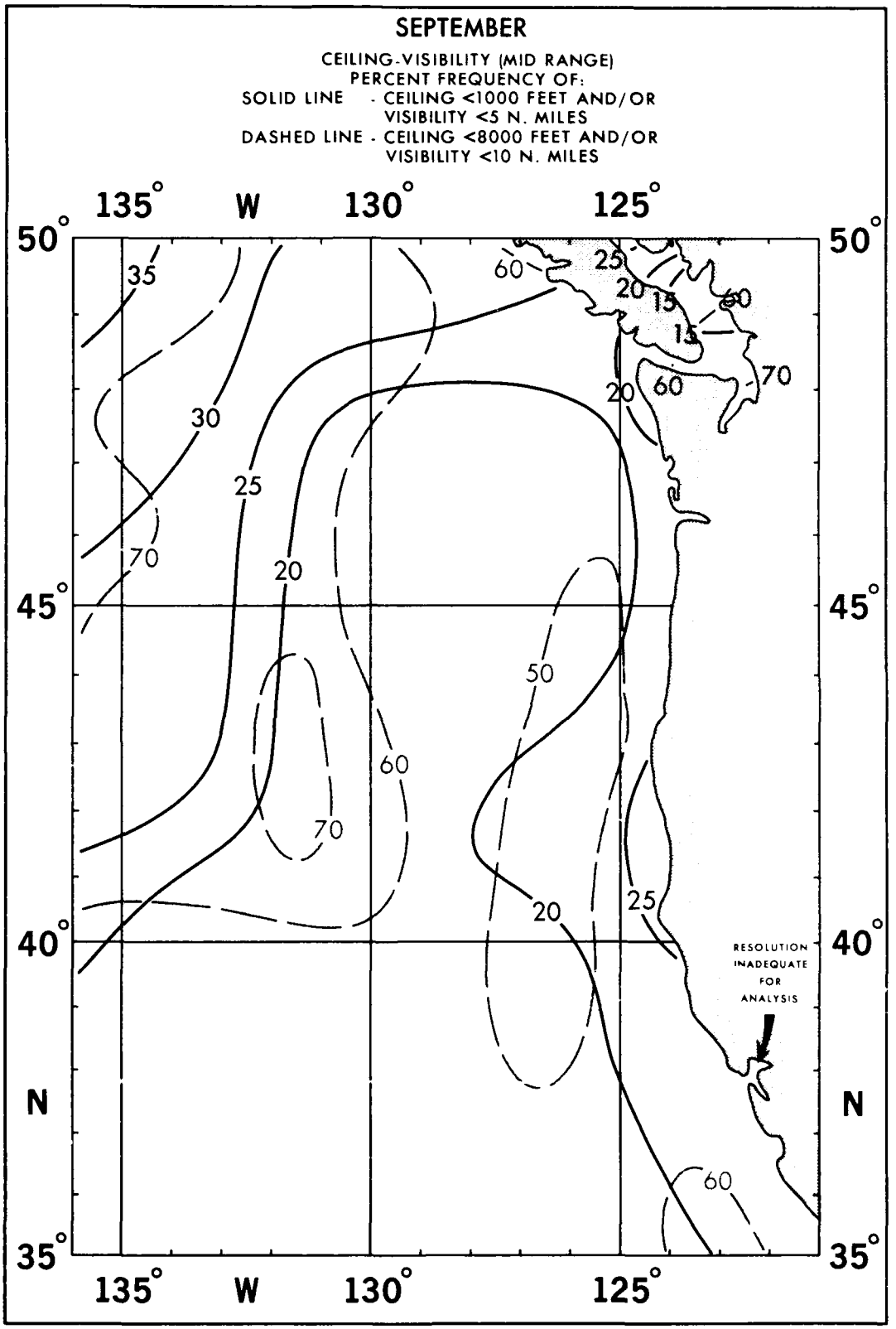

135° W 130° 125°
40° N 35°
AUGUST
SURFACE CURRENTS

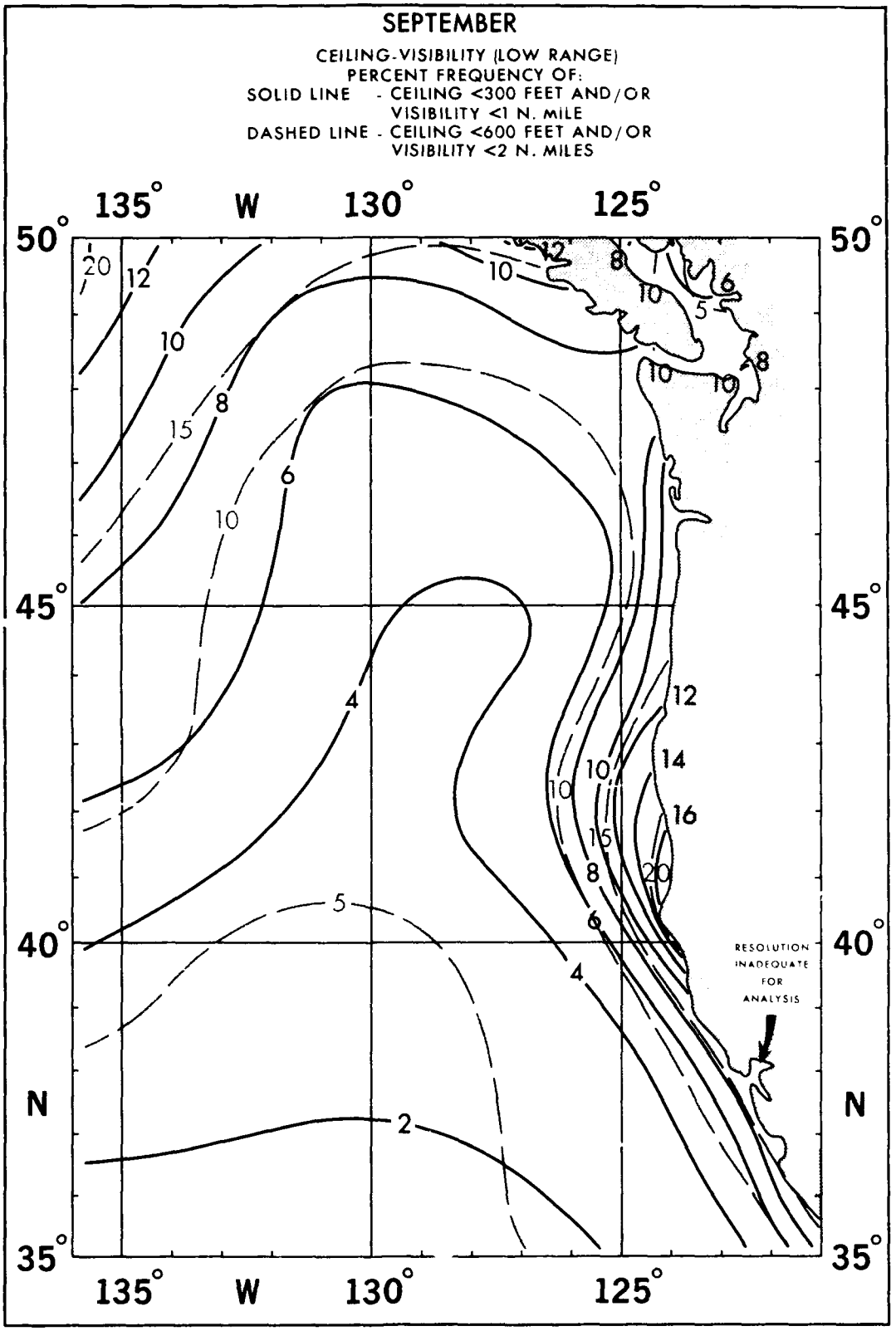

SEPTEMBER
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
60
20
40
50
30
70
80
10
PRECIPITATION INADEQUATE FOR ANALYSIS

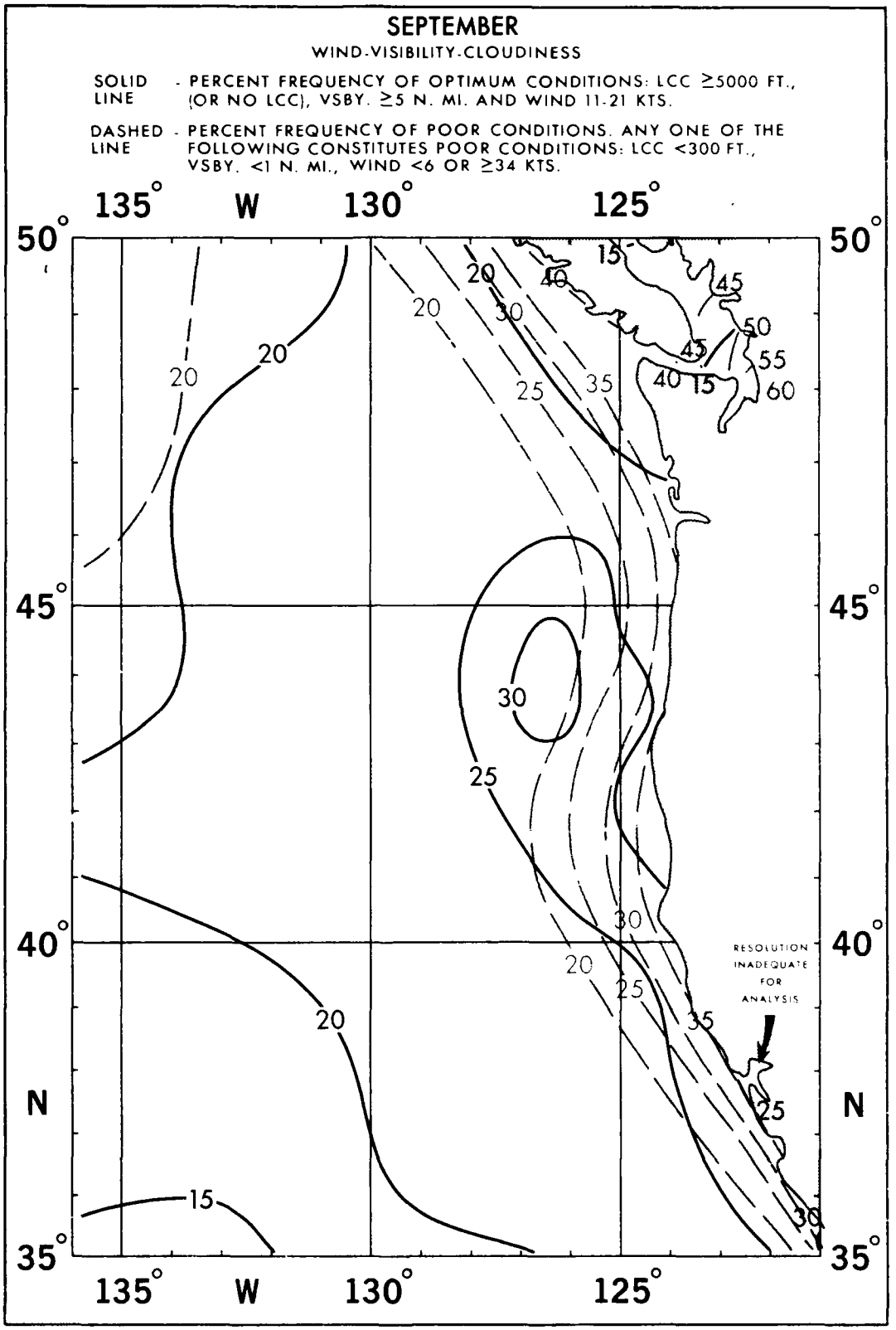

SEPTEMBER
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
13
12
11
10
9
8
7
6
5
4
3
2
RESOLUTION INADEQUATE FOR ANALYSIS

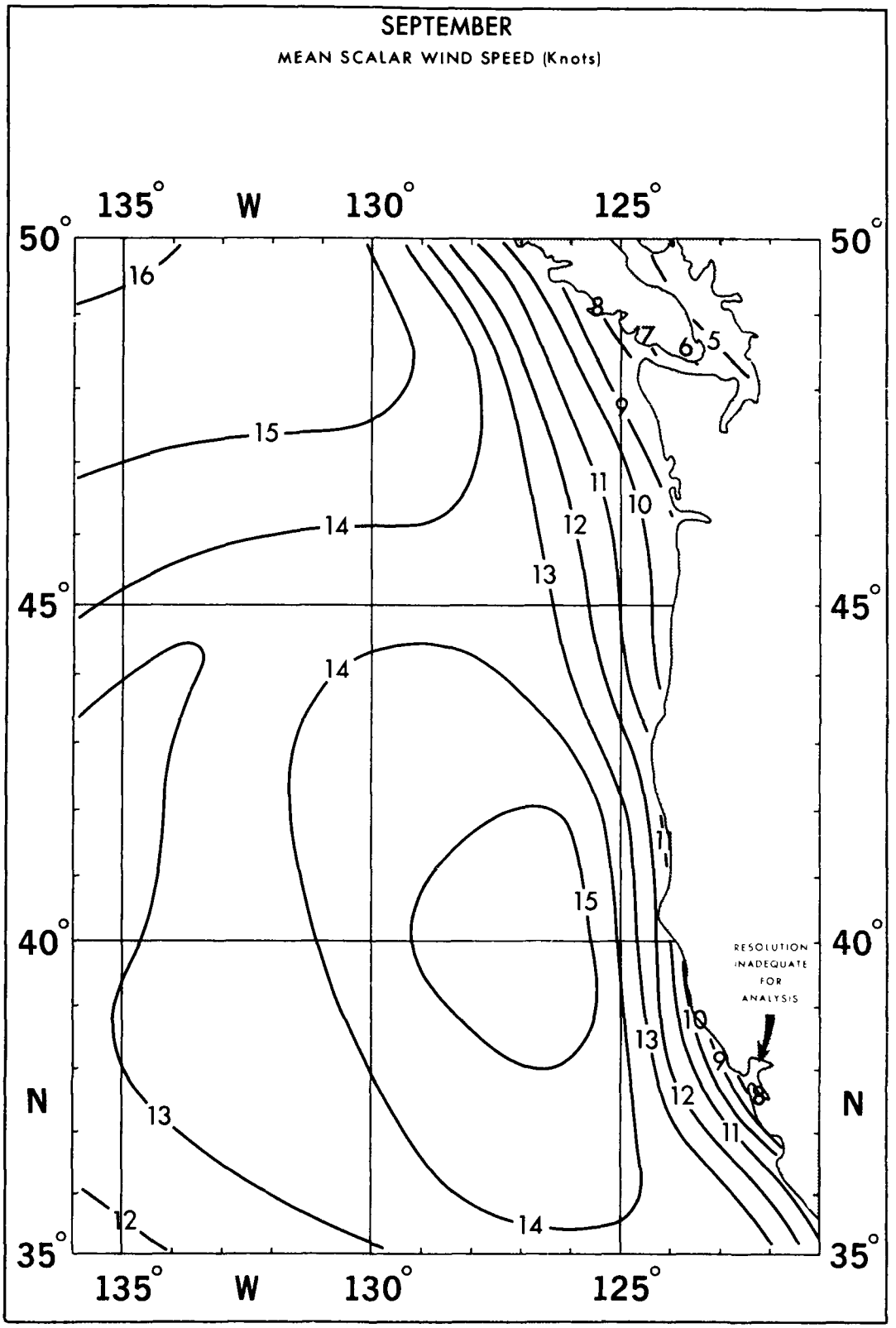

135° W 130° 125°
50°
45°
N
SEPTEMBER
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N = OBSERVATION COUNT.

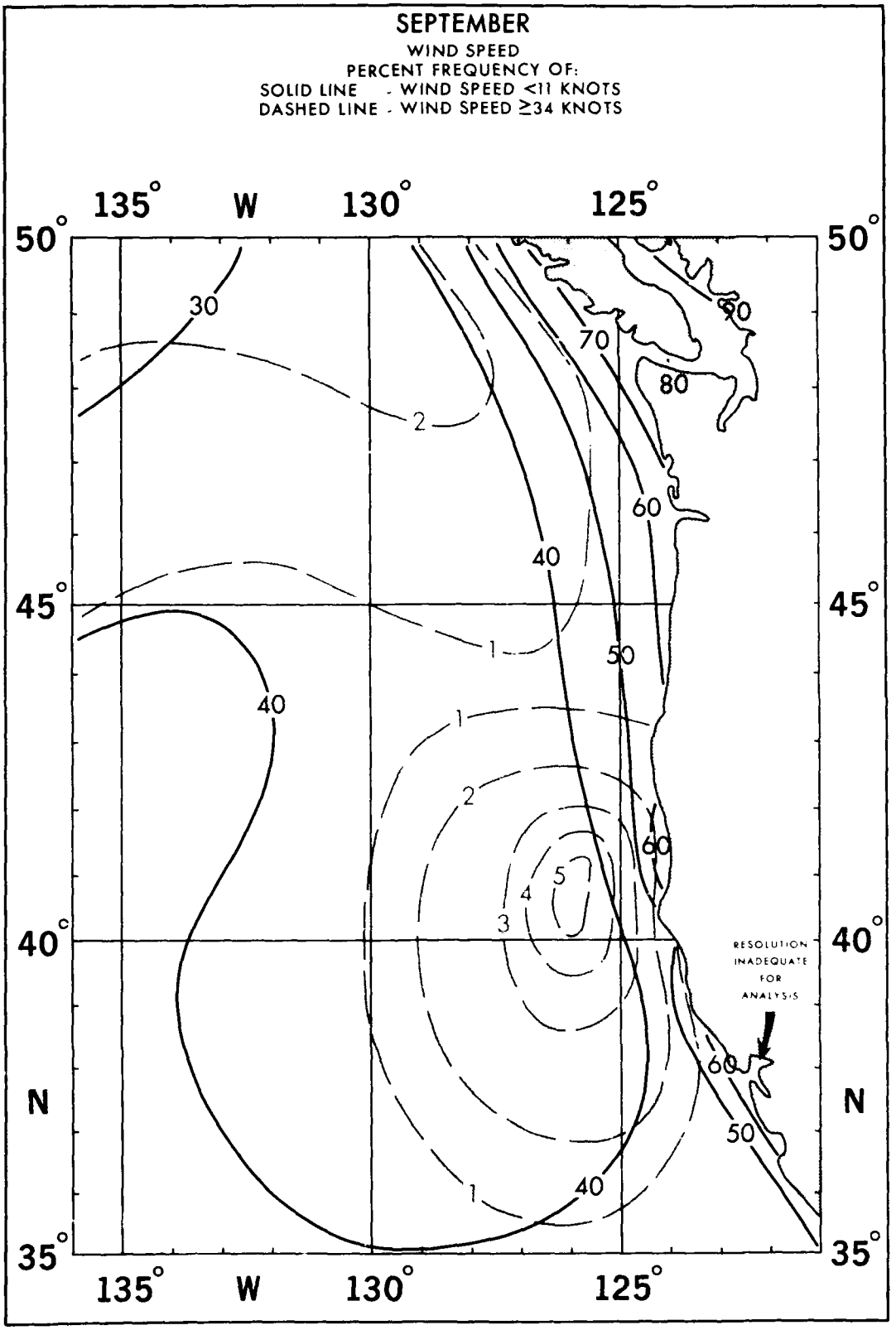

135° W 130° 125°
40°
N
35°
SEPTEMBER
VISIBILITY
(NAUTICAL MILES)

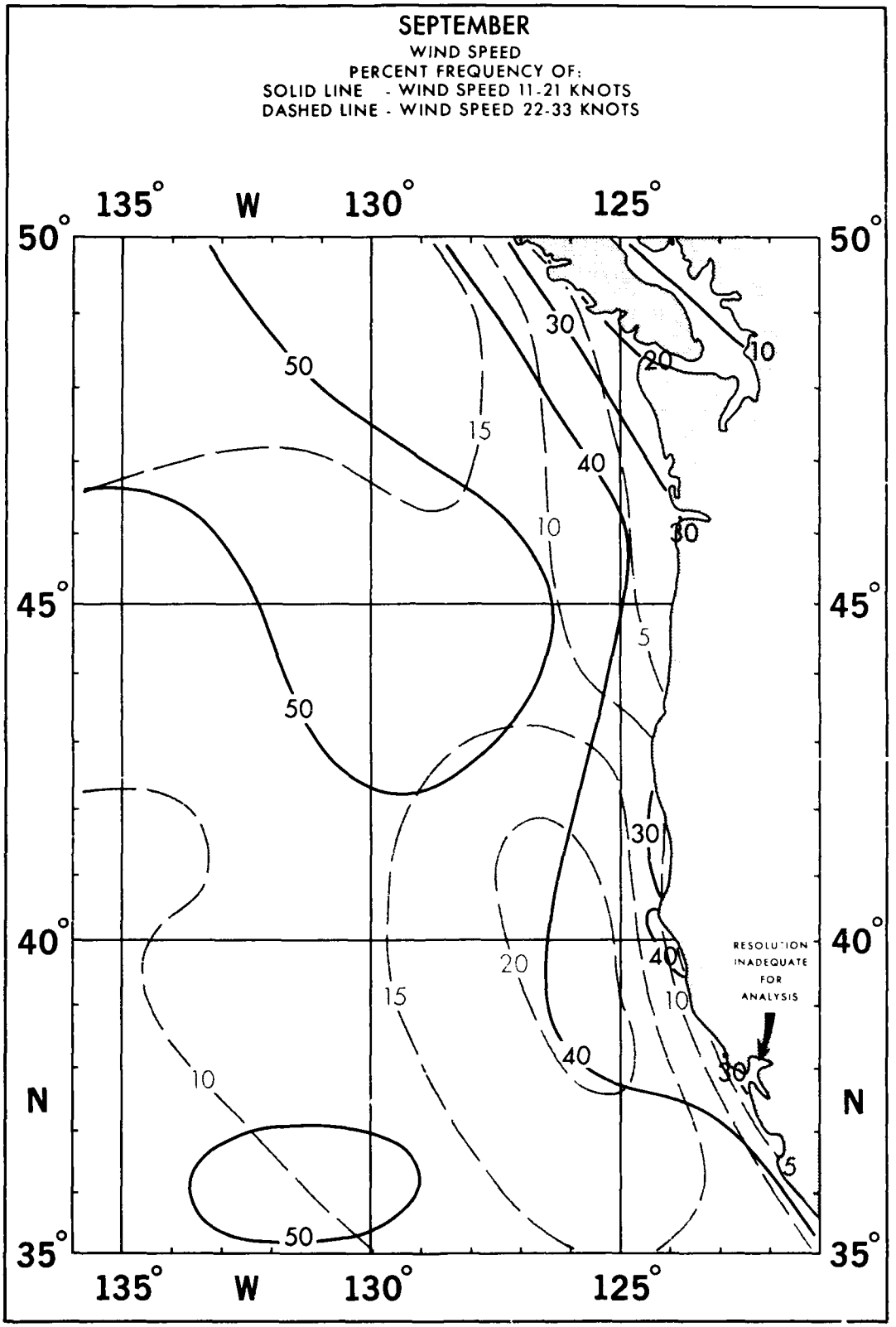

SEPTEMBER
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

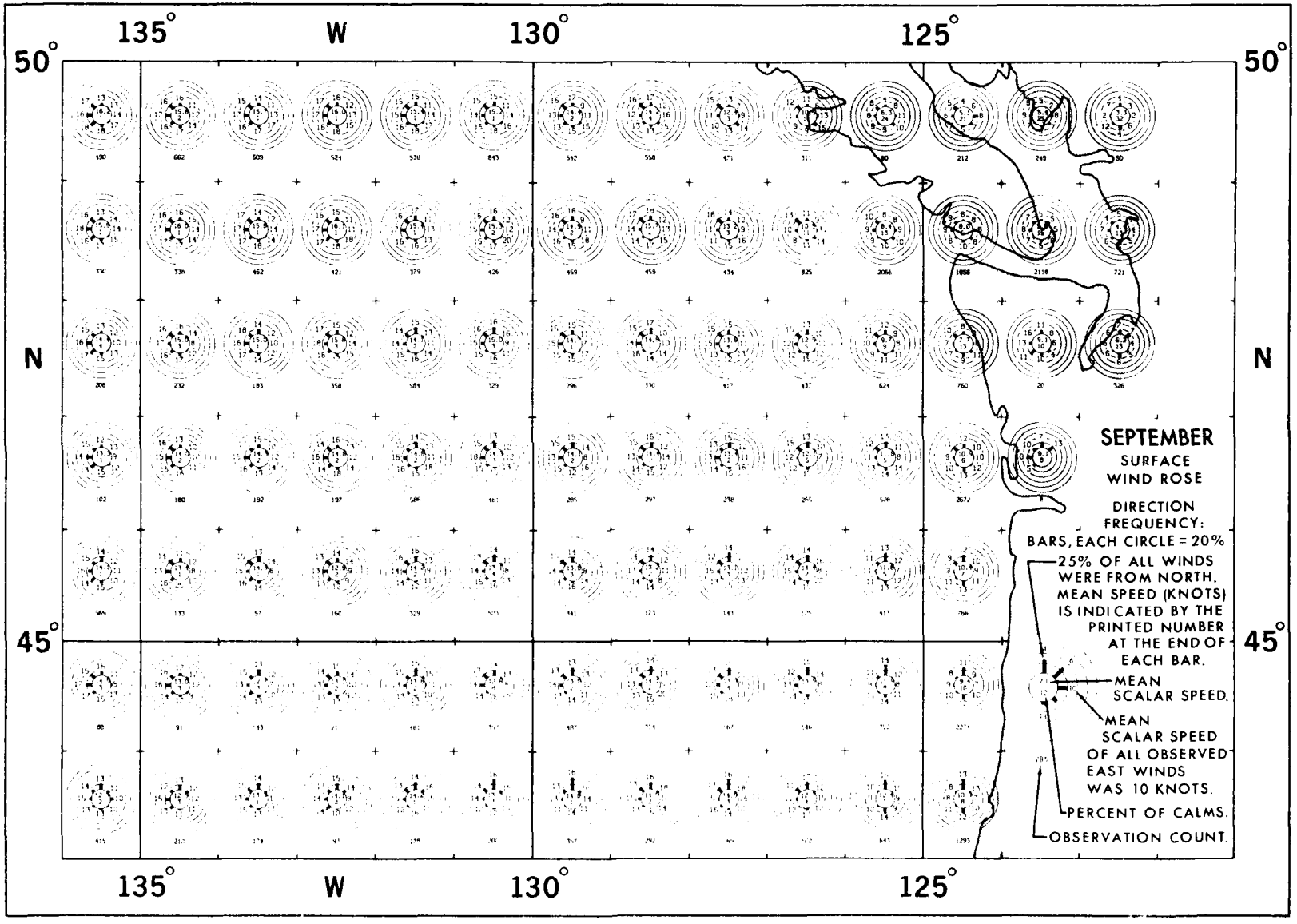

SEPTEMBER
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

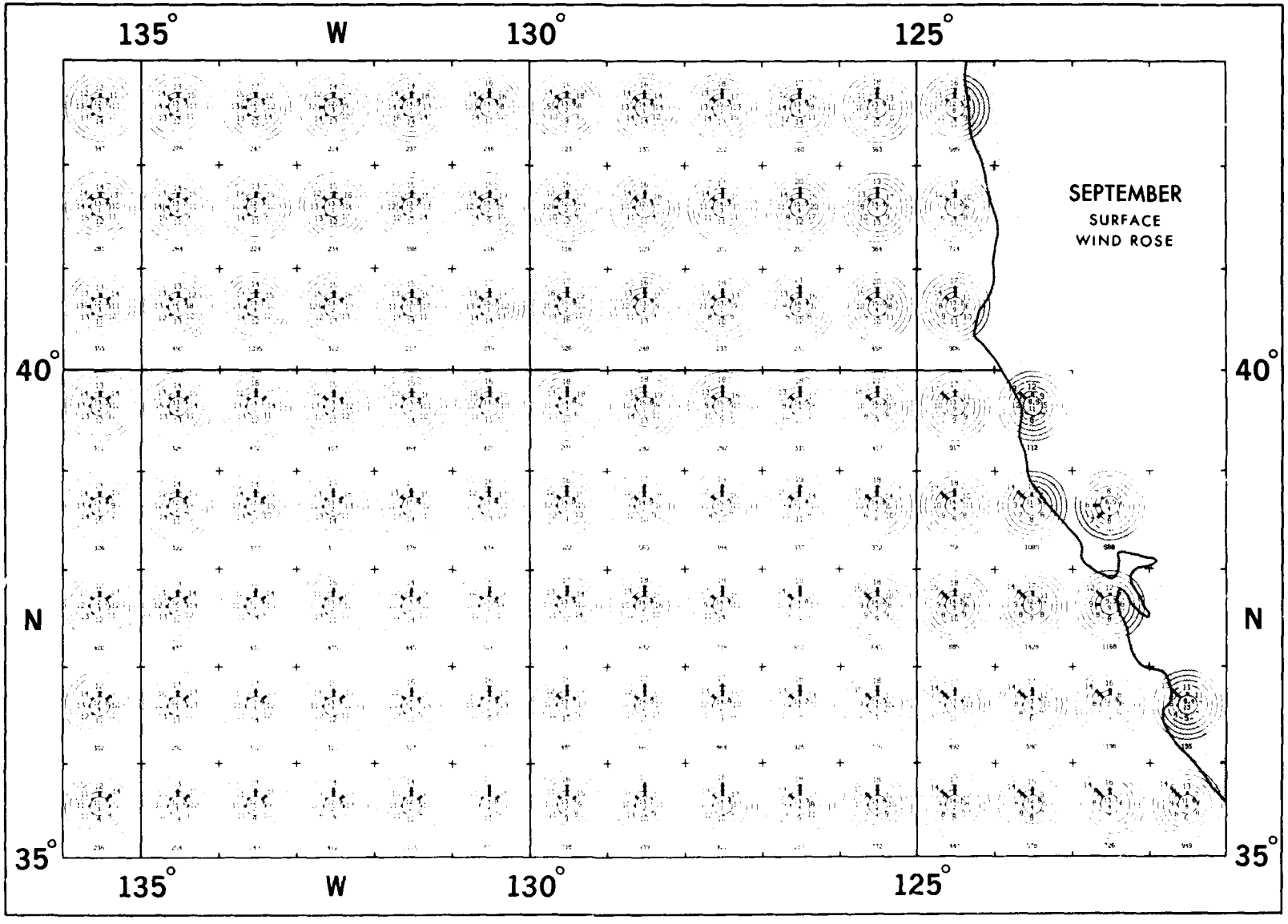

SEPTEMBER
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

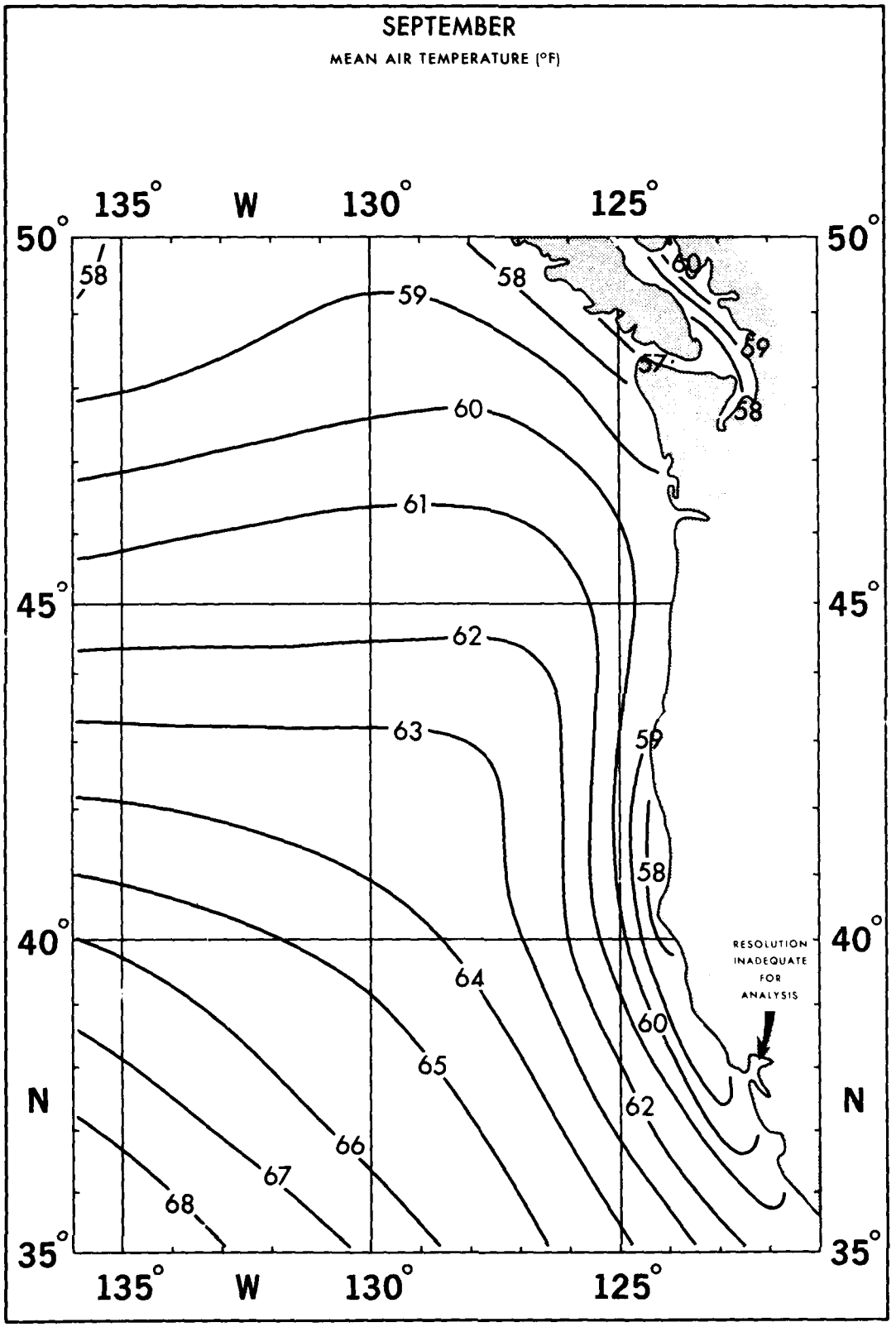

SEPTEMBER
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
35°
N
16
15
14
13
12
11
10
9
8
7
6
5
RESOLUTION INADEQUATE FOR ANALYSIS

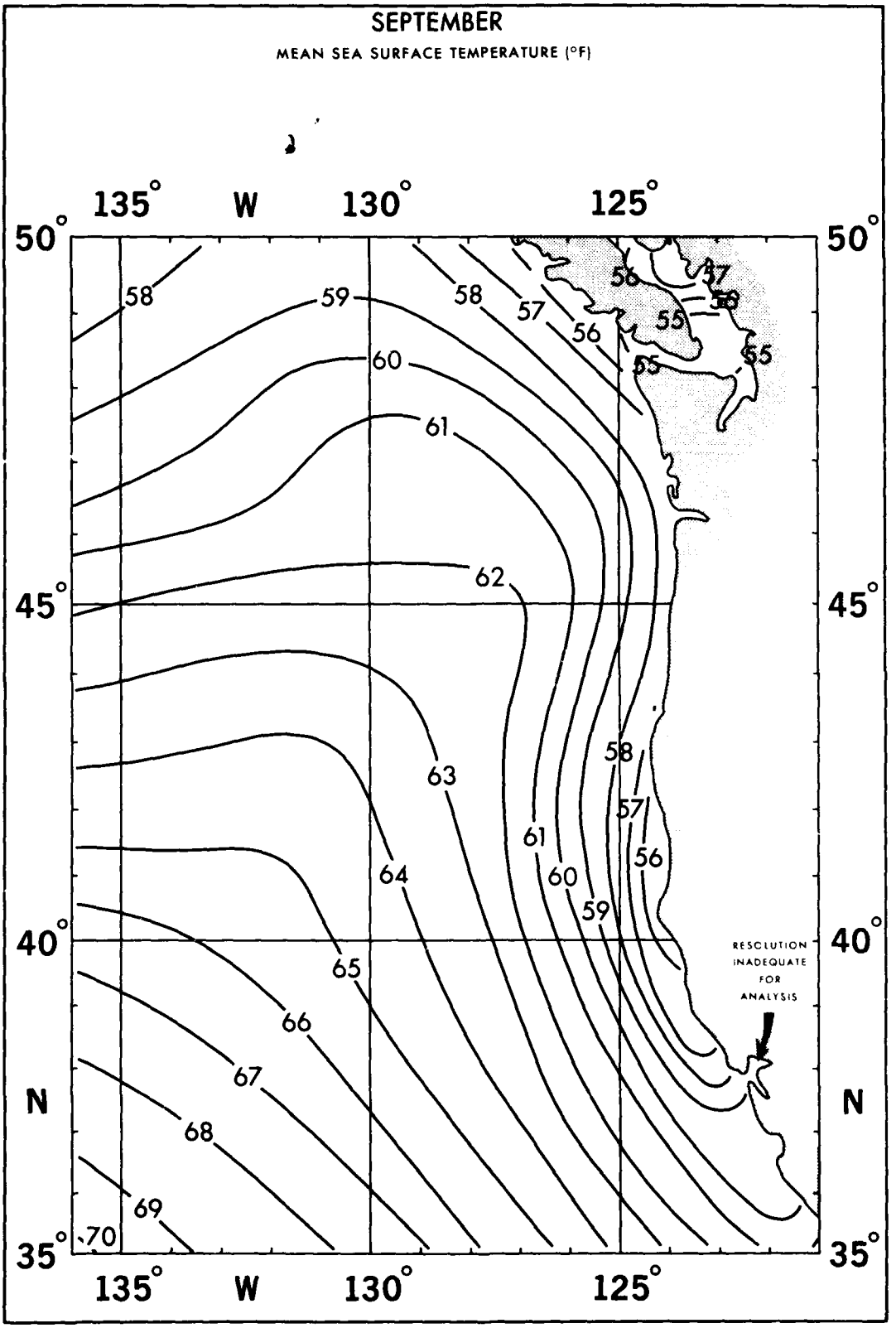

SEPTEMBER
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
30
2
40
1
40
1
2
3
4
5
60
70
80
60
40
50
60
50
40
RESOLUTION INADEQUATE FOR ANALYSIS

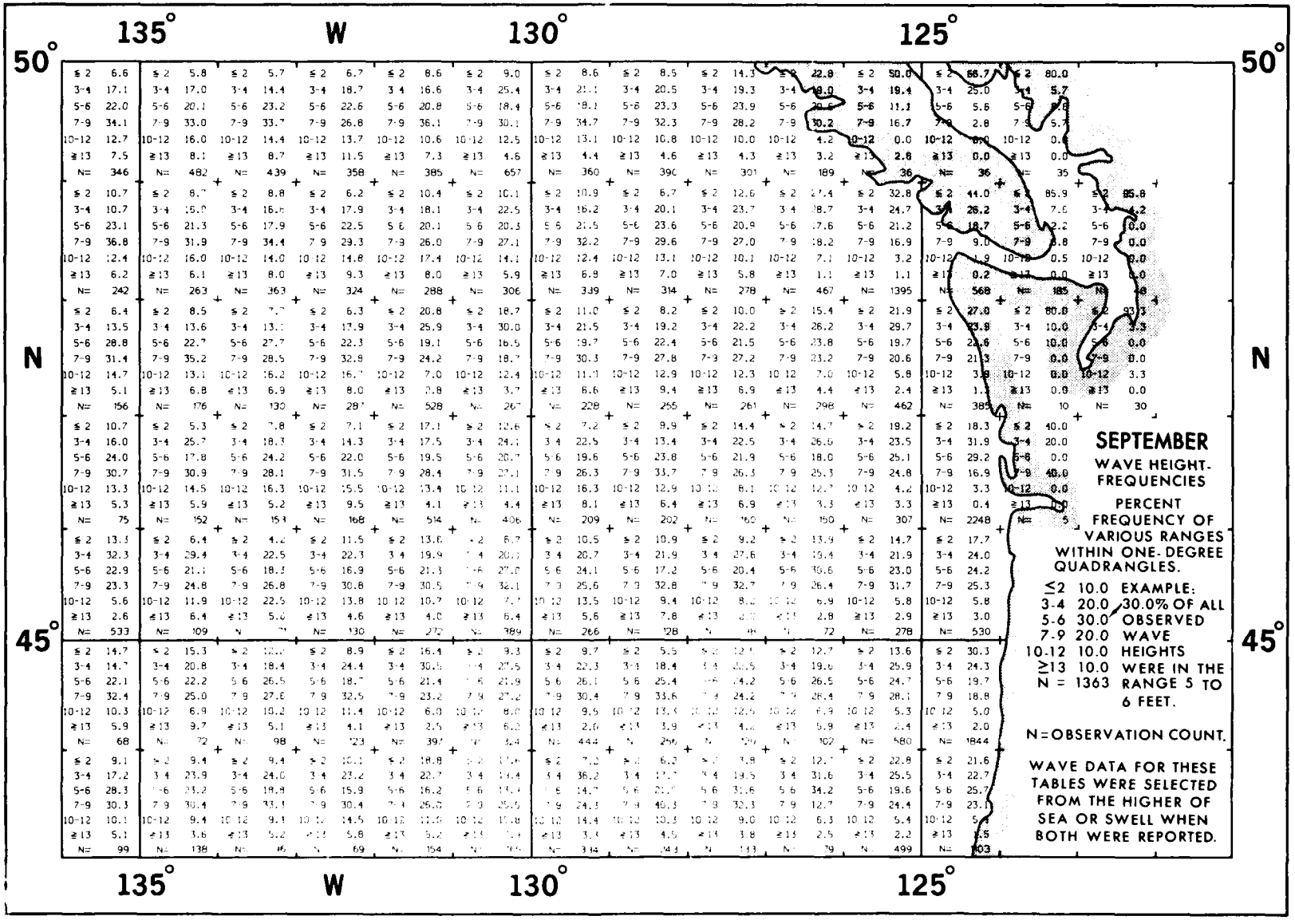

SEPTEMBER
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
50
15
10
30
20
40
5
RESOLUTION INADEQUATE FOR ANALYSIS

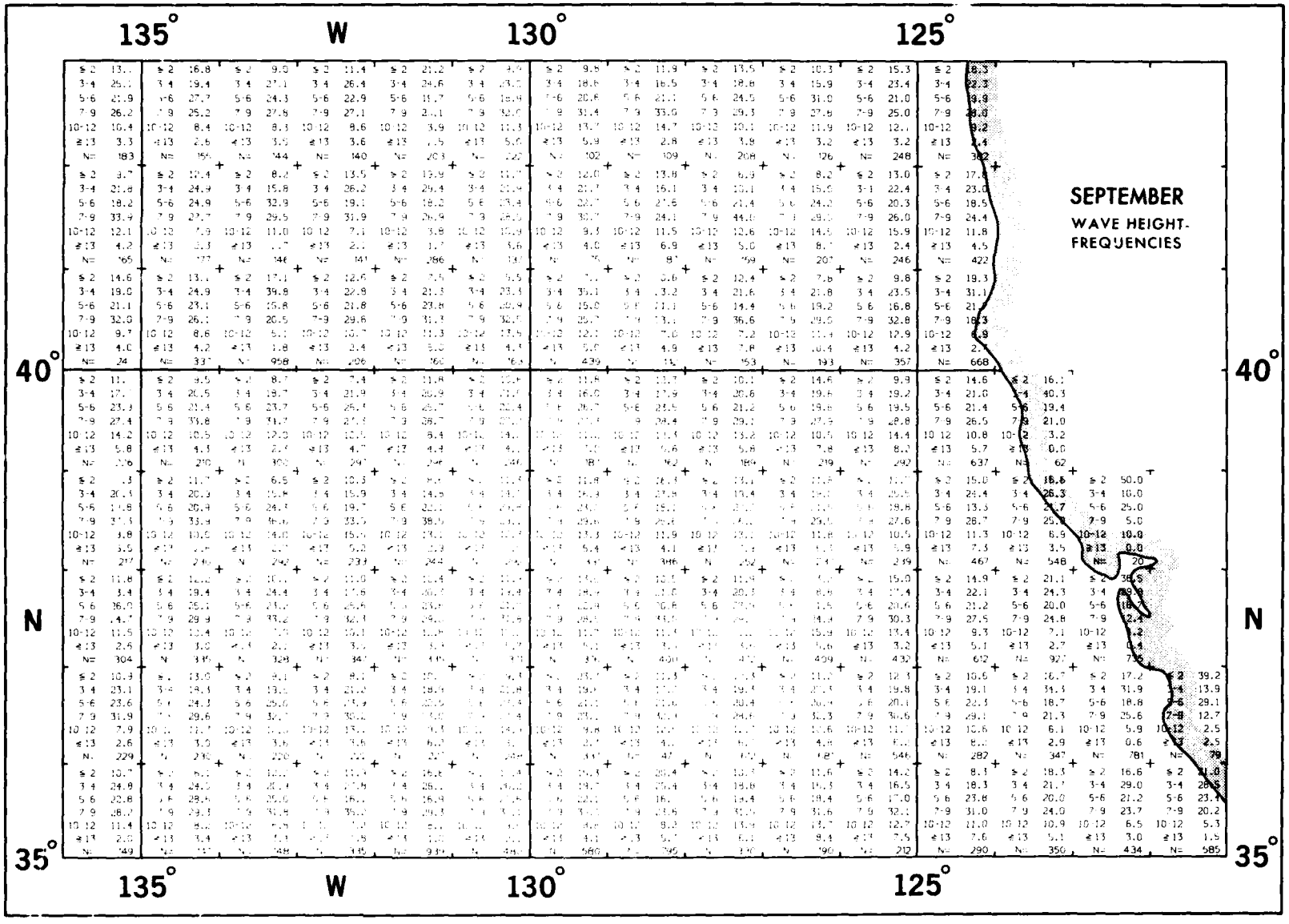

135° W 130° 125°
50°
45°
N
SEPTEMBER
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.


135° W 130° 125°
40°
N
35°
SEPTEMBER
SURFACE
WIND ROSE


SEPTEMBER
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
58
59
60
61
62
63
64
65
66
67
68
RESOLUTION INADEQUATE FOR ANALYSIS


SEPTEMBER
MEAN SEA SURFACE TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
58
59
60
61
62
63
64
65
66
67
68
69
70
57
56
55
RESOLUTION INADEQUATE FOR ANALYSIS

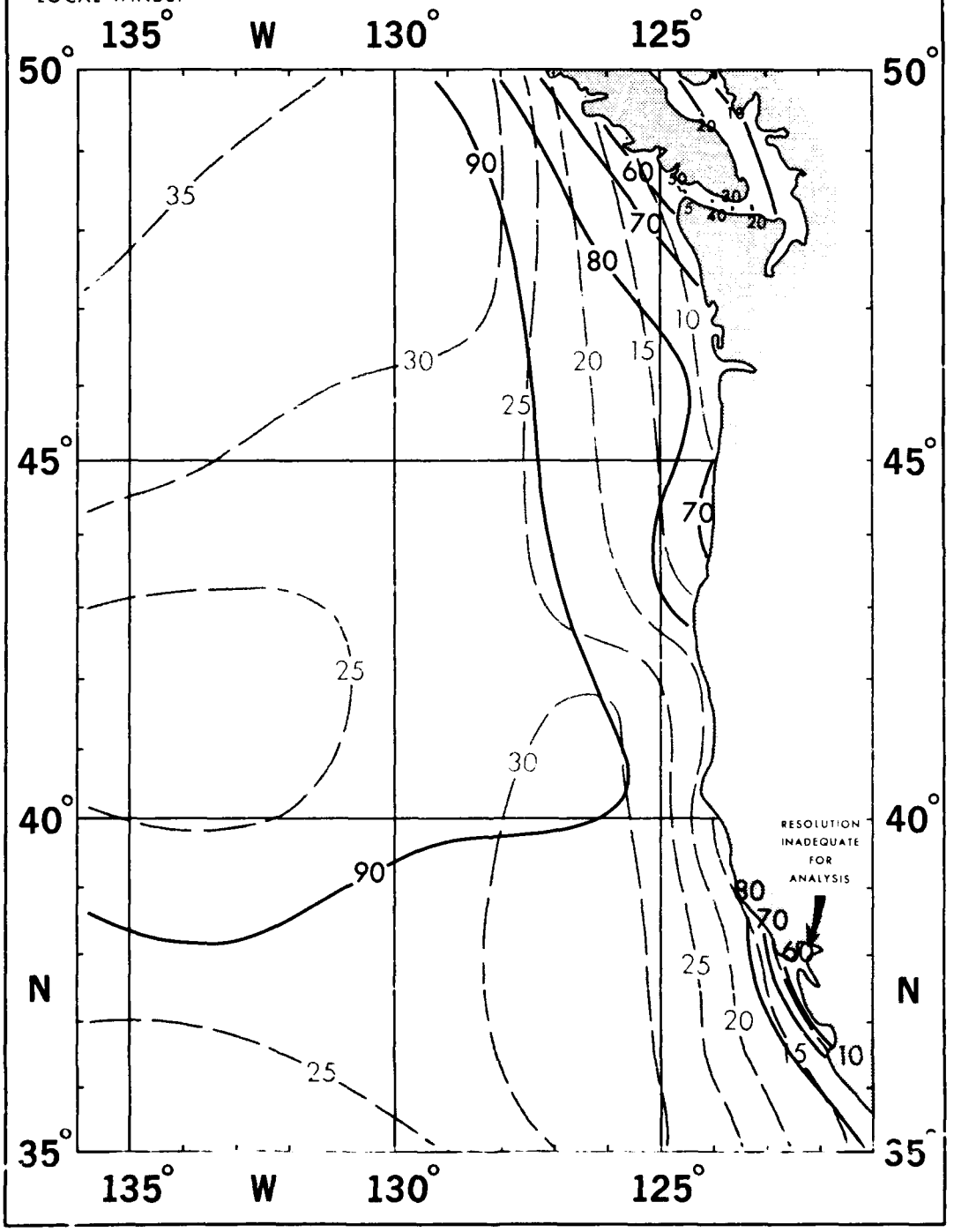

135° W 130° 125°
50°
45°
N
≤2 6.6
3-4 17.1
5-6 22.0
7-9 34.1
10-12 12.7
≥13 7.5
N= 346
≤2 5.8
3-4 17.0
5-6 20.1
7-9 33.0
10-12 16.0
≥13 8.1
N= 482
≤2 5.7
3-4 14.4
5-6 23.2
7-9 33.7
10-12 14.4
≥13 8.7
N= 439
≤2 6.7
3-4 18.7
5-6 22.6
7-9 26.8
10-12 13.7
≥13 11.5
N= 358
≤2 8.6
3-4 16.6
5-6 20.8
7-9 36.1
10-12 10.6
≥13 7.3
N= 385
≤2 9.0
3-4 25.4
5-6 18.4
7-9 30.1
10-12 12.5
≥13 4.6
N= 657
≤2 10.7
3-4 10.7
5-6 23.1
7-9 36.8
10-12 12.4
≥13 6.2
N= 242
≤2 8.7
3-4 16.0
5-6 21.3
7-9 31.9
10-12 16.0
≥13 6.1
N= 263
≤2 8.8
3-4 16.6
5-6 17.9
7-9 34.4
10-12 14.0
≥13 8.0
N= 363
≤2 6.2
3-4 17.9
5-6 22.5
7-9 29.3
10-12 14.8
≥13 9.3
N= 324
≤2 10.4
3-4 18.1
5-6 20.1
7-9 26.0
10-12 17.4
≥13 8.0
N= 288
≤2 10.1
3-4 22.5
5-6 20.3
7-9 27.1
10-12 14.1
≥13 5.9
N= 306
≤2 6.4
3-4 13.5
5-6 28.8
7-9 31.4
10-12 14.7
≥13 5.1
N= 156
≤2 8.5
3-4 13.6
5-6 22.7
7-9 35.2
10-12 13.1
≥13 6.8
N= 176
≤2 7.7
3-4 13.1
5-6 27.7
7-9 28.5
10-12 16.2
≥13 6.9
N= 130
≤2 6.3
3-4 17.9
5-6 22.3
7-9 32.9
10-12 16.7
≥13 8.0
N= 287
≤2 20.8
3-4 25.9
5-6 19.1
7-9 24.2
10-12 7.0
≥13 7.8
N= 528
≤2 18.7
3-4 30.0
5-6 16.5
7-9 18.7
10-12 12.4
≥13 3.7
N= 267
≤2 10.7
3-4 16.0
5-6 24.0
7-9 30.7
10-12 13.3
≥13 5.9
N= 75
≤2 5.3
3-4 25.7
5-6 17.8
7-9 30.9
10-12 14.5
≥13 5.9
N= 152
≤2 7.8
3-4 18.3
5-6 24.2
7-9 28.1
10-12 16.3
≥13 5.2
N= 154
≤2 7.1
3-4 14.3
5-6 22.0
7-9 31.5
10-12 15.5
≥13 9.5
N= 168
≤2 17.1
3-4 17.5
5-6 19.5
7-9 28.4
10-12 13.4
≥13 4.1
N= 514
≤2 12.6
3-4 24.1
5-6 20.7
7-9 27.1
10-12 11.1
≥13 4.4
N= 406
≤2 13.3
3-4 32.3
5-6 22.9
7-9 23.3
10-12 5.6
≥13 2.6
N= 533
≤2 14.7
3-4 14.7
5-6 22.1
7-9 32.4
10-12 10.3
≥13 5.9
N= 68
≤2 15.3
3-4 20.8
5-6 22.2
7-9 25.0
10-12 6.9
≥13 9.7
N= 72
≤2 12.0
3-4 18.4
5-6 26.5
7-9 27.6
10-12 10.2
≥13 5.1
N= 98
≤2 8.9
3-4 24.4
5-6 18.7
7-9 32.5
10-12 11.4
≥13 4.1
N= 123
≤2 16.4
3-4 30.5
5-6 21.4
7-9 23.2
10-12 6.0
≥13 2.5
N= 397
≤2 9.3
3-4 27.5
5-6 21.9
7-9 27.2
10-12 8.0
≥13 6.2
N= 644
≤2 9.4
3-4 23.9
5-6 21.2
7-9 30.4
10-12 9.1
≥13 3.6
N= 138
≤2 9.4
3-4 24.0
5-6 18.8
7-9 33.1
10-12 10.1
≥13 5.2
N= 96
≤2 10.1
3-4 23.2
5-6 15.9
7-9 30.4
10-12 14.5
≥13 5.8
N= 69
≤2 18.8
3-4 22.7
5-6 16.2
7-9 26.6
10-12 11.6
≥13 5.2
N= 154
≤2 8.6
3-4 21.1
5-6 20.1
7-9 34.7
10-12 13.1
≥13 4.4
N= 360
≤2 8.5
3-4 20.5
5-6 23.3
7-9 32.3
10-12 10.8
≥13 4.6
N= 390
≤2 14.3
3-4 19.3
5-6 23.9
7-9 28.2
10-12 10.0
≥13 4.3
N= 301
≤2 22.8
3-4 18.0
5-6 20.3
7-9 30.2
10-12 4.2
≥13 3.2
N= 189
≤2 50.0
3-4 19.4
5-6 11.1
7-9 16.7
10-12 0.0
≥13 2.8
N= 36
≤2 10.9
3-4 16.2
5-6 21.5
7-9 32.2
10-12 12.4
≥13 6.8
N= 349
≤2 6.7
3-4 20.1
5-6 23.6
7-9 29.6
10-12 13.1
≥13 7.0
N= 314
≤2 12.6
3-4 23.7
5-6 20.9
7-9 27.0
10-12 10.1
≥13 5.8
N= 278
≤2 27.4
3-4 18.7
5-6 17.6
7-9 18.2
10-12 7.1
≥13 1.1
N= 467
≤2 32.8
3-4 24.7
5-6 21.2
7-9 16.9
10-12 3.2
≥13 1.1
N= 1395
≤2 11.0
3-4 21.5
5-6 19.7
7-9 30.3
10-12 11.0
≥13 6.6
N= 228
≤2 8.2
3-4 19.2
5-6 22.4
7-9 27.8
10-12 12.9
≥13 9.4
N= 255
≤2 10.0
3-4 22.2
5-6 21.5
7-9 27.2
10-12 12.3
≥13 6.9
N= 261
≤2 15.4
3-4 26.2
5-6 23.8
7-9 23.2
10-12 7.0
≥13 4.4
N= 298
≤2 21.9
3-4 29.7
5-6 19.7
7-9 20.6
10-12 5.8
≥13 2.4
N= 462
≤2 7.2
3-4 22.5
5-6 19.6
7-9 26.3
10-12 16.3
≥13 8.1
N= 209
≤2 9.9
3-4 13.4
5-6 23.8
7-9 33.7
10-12 12.9
≥13 6.4
N= 202
≤2 14.4
3-4 22.5
5-6 21.9
7-9 26.3
10-12 8.1
≥13 6.9
N= 160
≤2 14.7
3-4 26.6
5-6 18.0
7-9 25.3
10-12 12.7
≥13 3.3
N= 150
≤2 19.2
3-4 23.5
5-6 25.1
7-9 24.8
10-12 4.2
≥13 3.3
N= 307
≤2 10.5
3-4 20.7
5-6 24.1
7-9 25.6
10-12 13.5
≥13 5.6
N= 266
≤2 10.9
3-4 21.9
5-6 17.2
7-9 32.8
10-12 9.4
≥13 7.8
N= 128
≤2 9.2
3-4 27.6
5-6 20.4
7-9 32.7
10-12 8.2
≥13 2.8
N= 49
≤2 13.9
3-4 19.4
5-6 10.6
7-9 26.4
10-12 6.9
≥13 2.8
N= 72
≤2 14.7
3-4 21.9
5-6 23.0
7-9 31.7
10-12 5.8
≥13 2.9
N= 278
≤2 9.7
3-4 22.3
5-6 25.4
7-9 30.4
10-12 9.5
≥13 2.0
N= 444
≤2 5.5
3-4 18.4
5-6 24.2
7-9 33.6
10-12 13.5
≥13 3.9
N= 256
≤2 12.7
3-4 19.6
5-6 26.5
7-9 26.4
10-12 6.9
≥13 5.9
N= 102
≤2 13.6
3-4 25.9
5-6 24.7
7-9 28.1
10-12 5.3
≥13 4.4
N= 580
≤2 7.2
3-4 36.2
5-6 14.7
7-9 24.3
10-12 14.4
≥13 3.4
N= 316
≤2 6.2
3-4 17.7
5-6 21.0
7-9 40.3
10-12 10.3
≥13 4.5
N= 249
≤2 7.8
3-4 19.5
5-6 31.6
7-9 32.3
10-12 9.0
≥13 3.8
N= 133
≤2 12.7
3-4 31.6
5-6 34.2
7-9 12.7
10-12 6.3
≥13 2.5
N= 79
≤2 22.8
3-4 25.5
5-6 19.6
7-9 24.4
10-12 5.4
≥13 2.2
N= 499
≤2 68.7
3-4 25.0
5-6 5.6
7-9 2.8
10-12 0.0
≥13 0.0
N= 36
≤2 80.0
3-4 5.7
5-6 5.7
7-9 5.7
10-12 0.0
≥13 0.0
N= 35
≤2 44.0
3-4 26.2
5-6 18.7
7-9 9.0
10-12 3.9
≥13 0.2
N= 568
≤2 85.9
3-4 7.6
5-6 2.2
7-9 3.8
10-12 0.5
≥13 0.0
N= 185
≤2 80.0
3-4 10.0
5-6 10.0
7-9 0.0
10-12 0.0
≥13 0.0
N= 10
≤2 40.0
3-4 20.0
5-6 0.0
7-9 40.0
10-12 0.0
≥13 0.0
N= 5
≤2 18.3
3-4 31.9
5-6 29.2
7-9 16.9
10-12 3.3
≥13 0.4
N= 2248
≤2 17.7
3-4 24.0
5-6 24.2
7-9 25.3
10-12 5.8
≥13 3.0
N= 530
≤2 30.3
3-4 24.3
5-6 19.7
7-9 18.8
10-12 5.0
≥13 2.0
N= 1844
≤2 21.6
3-4 22.7
5-6 25.7
7-9 23.1
10-12 5.
≥13 1.5
N= 603
SEPTEMBER
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

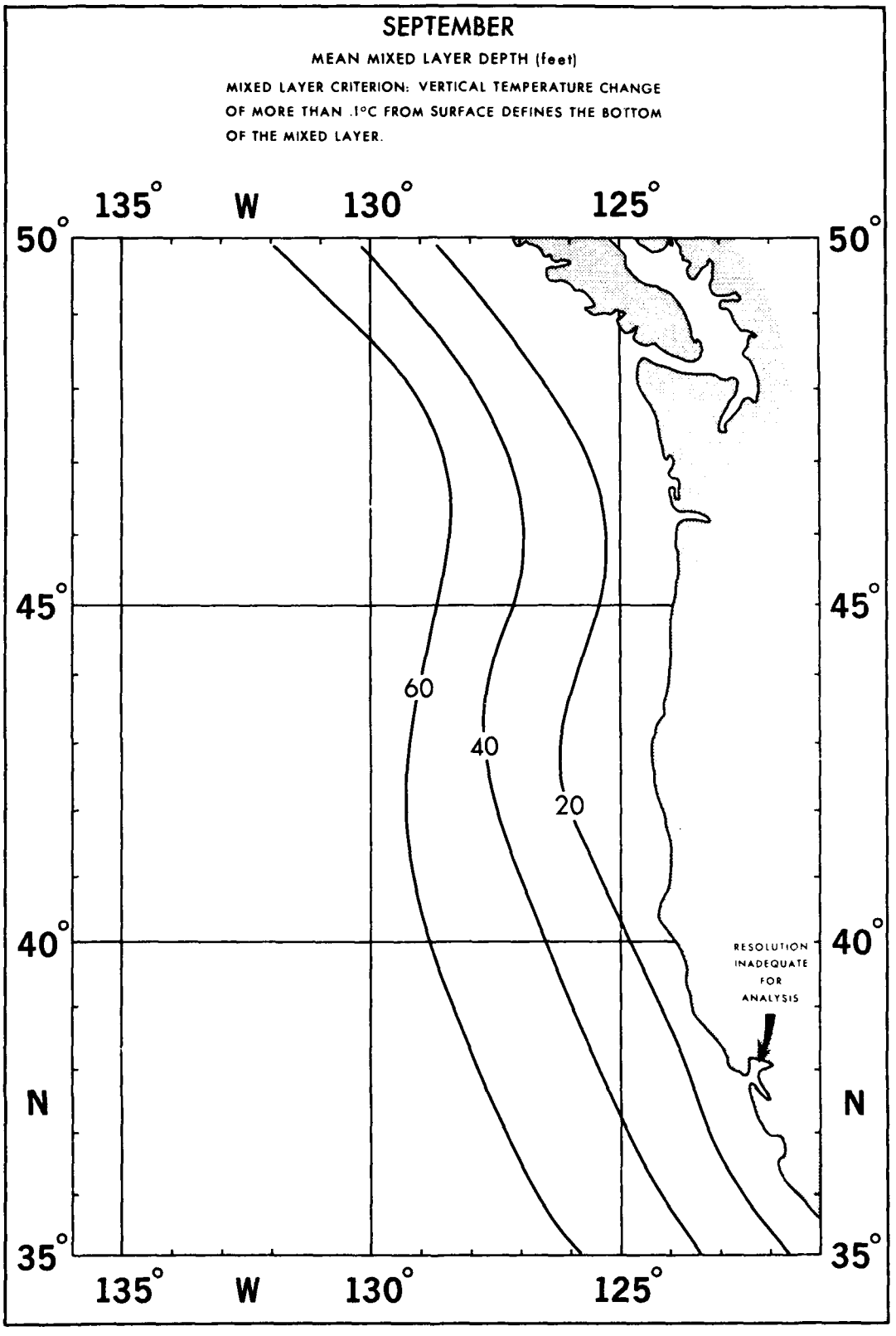

135° W 130° 125°
40°
N
35°
SEPTEMBER
WAVE HEIGHT-
FREQUENCIES

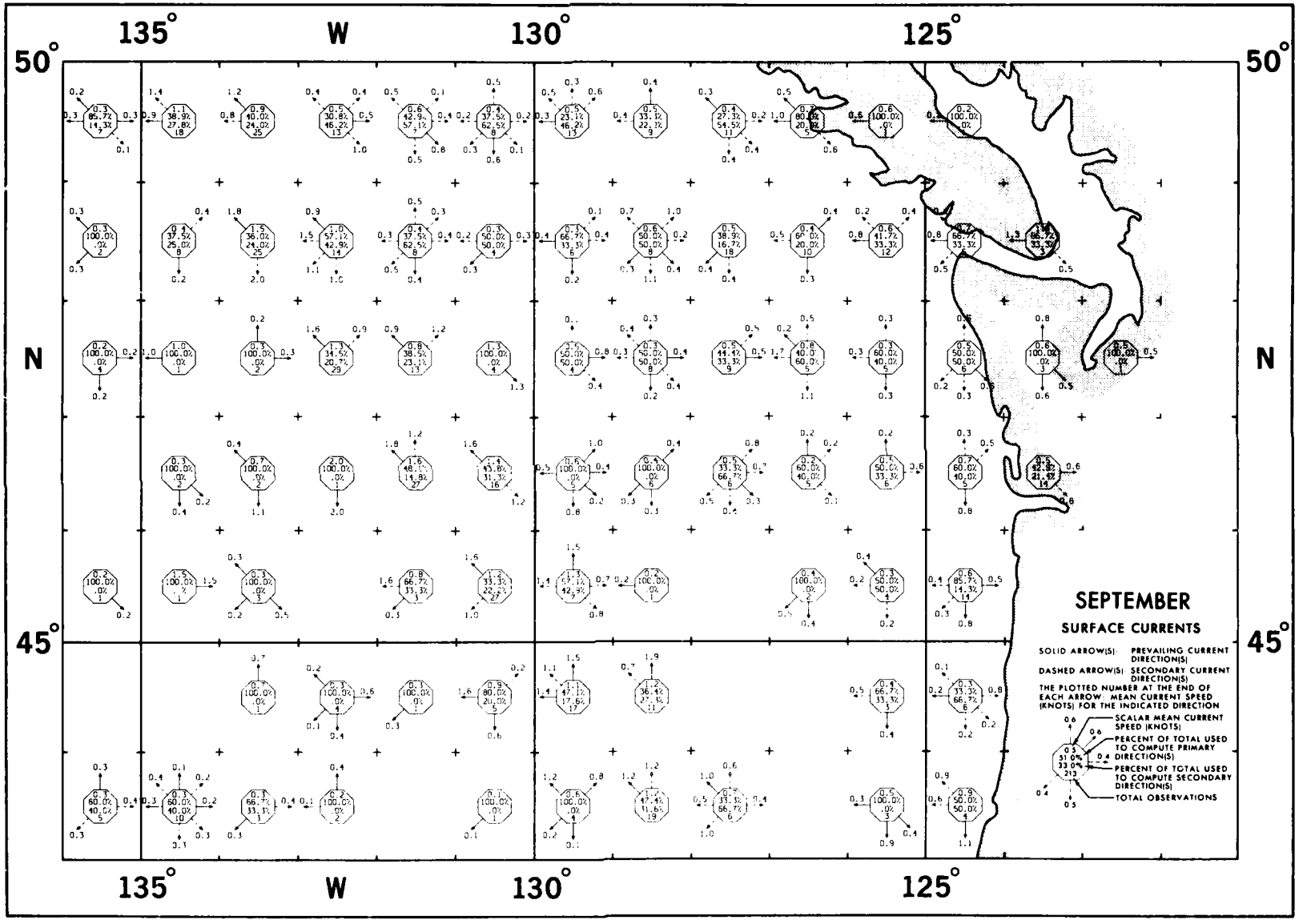
SEPTEMBER

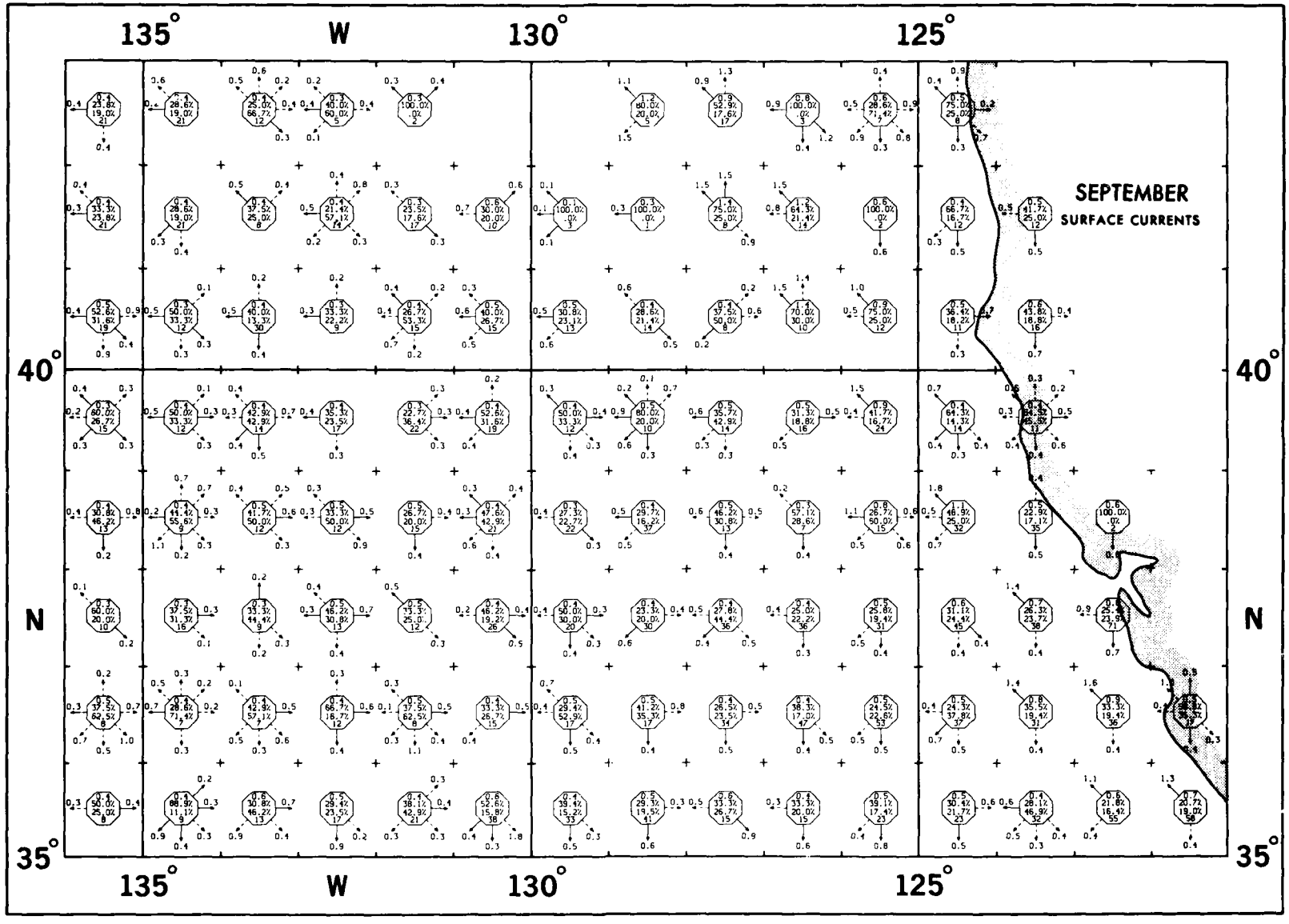
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)

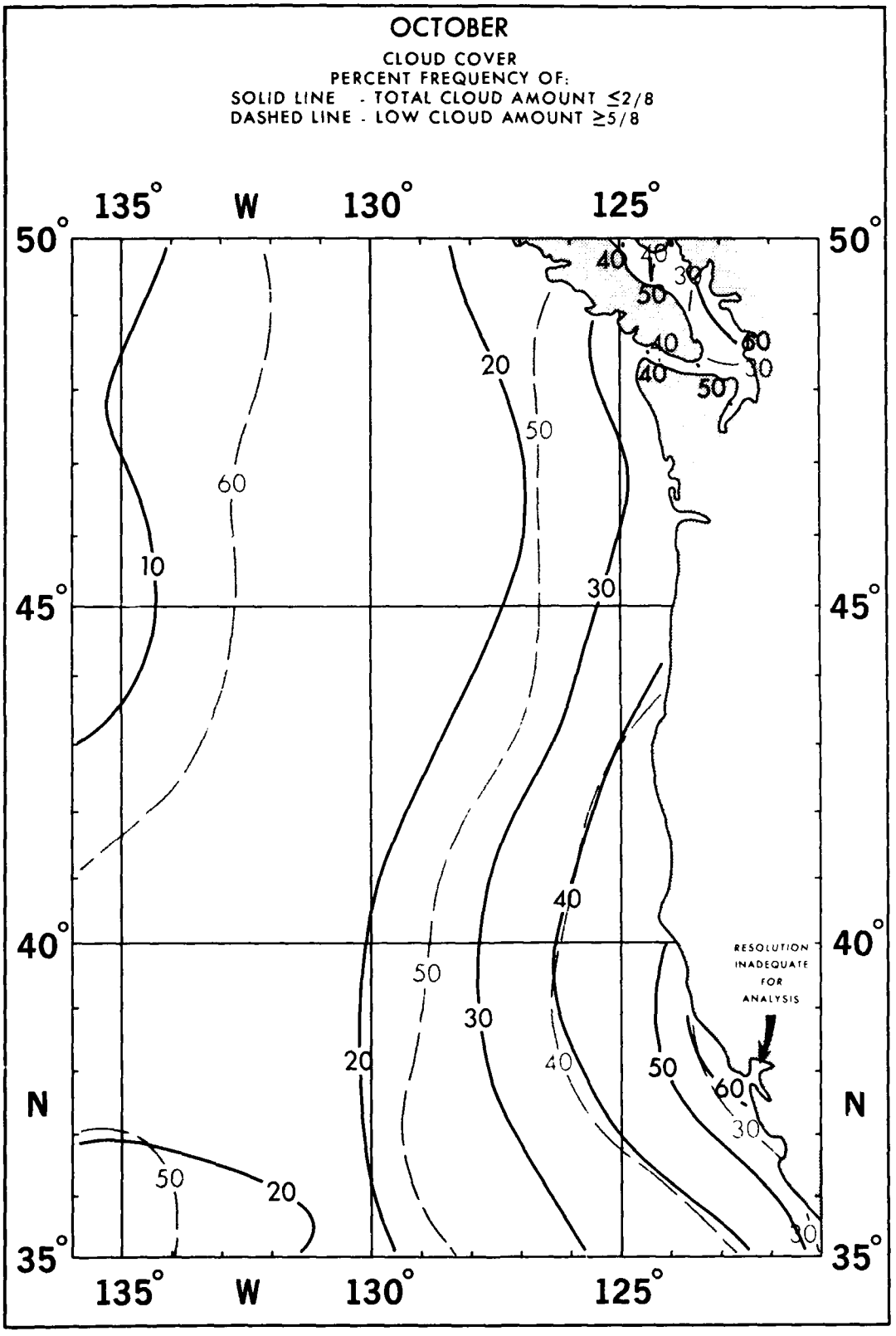
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.

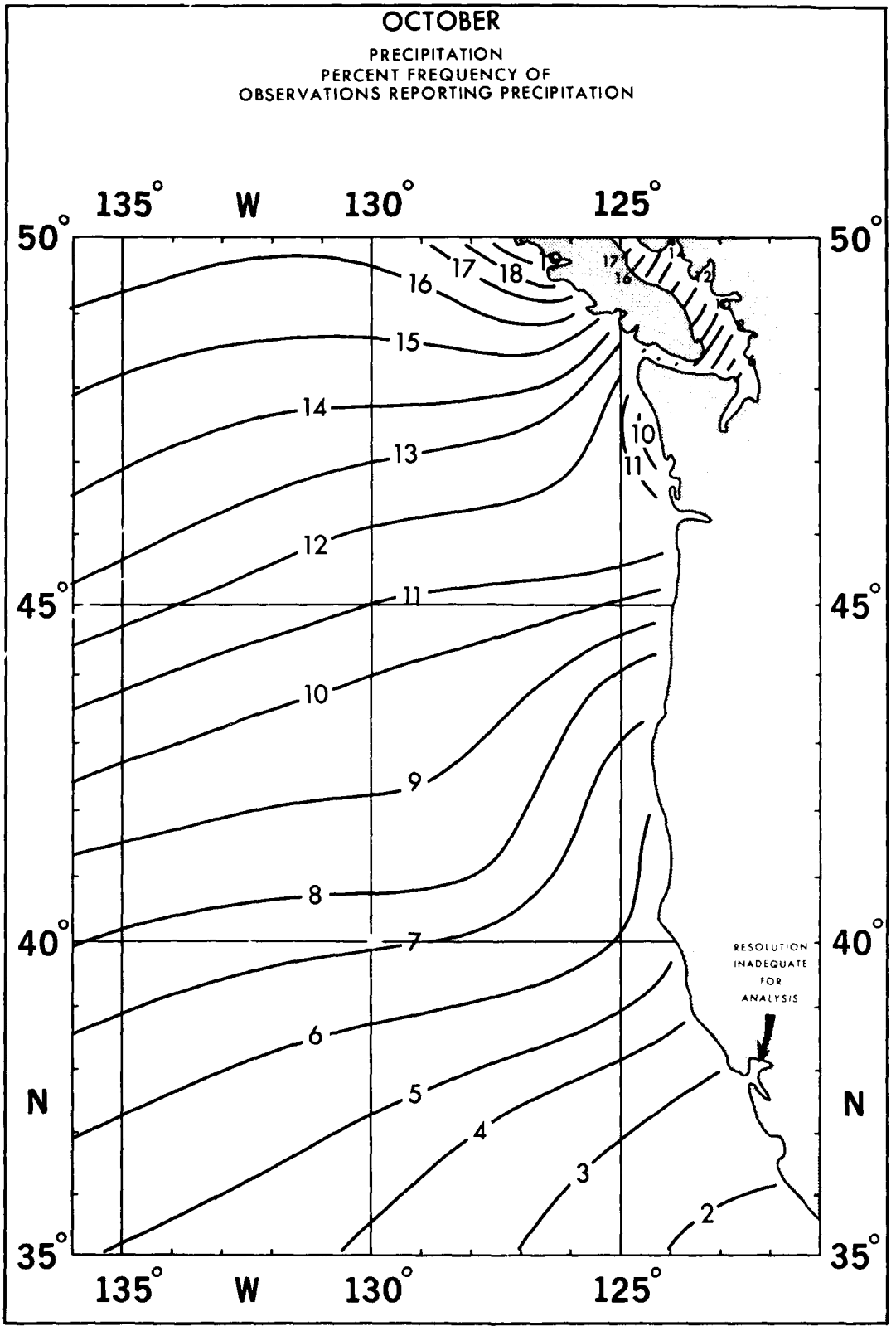


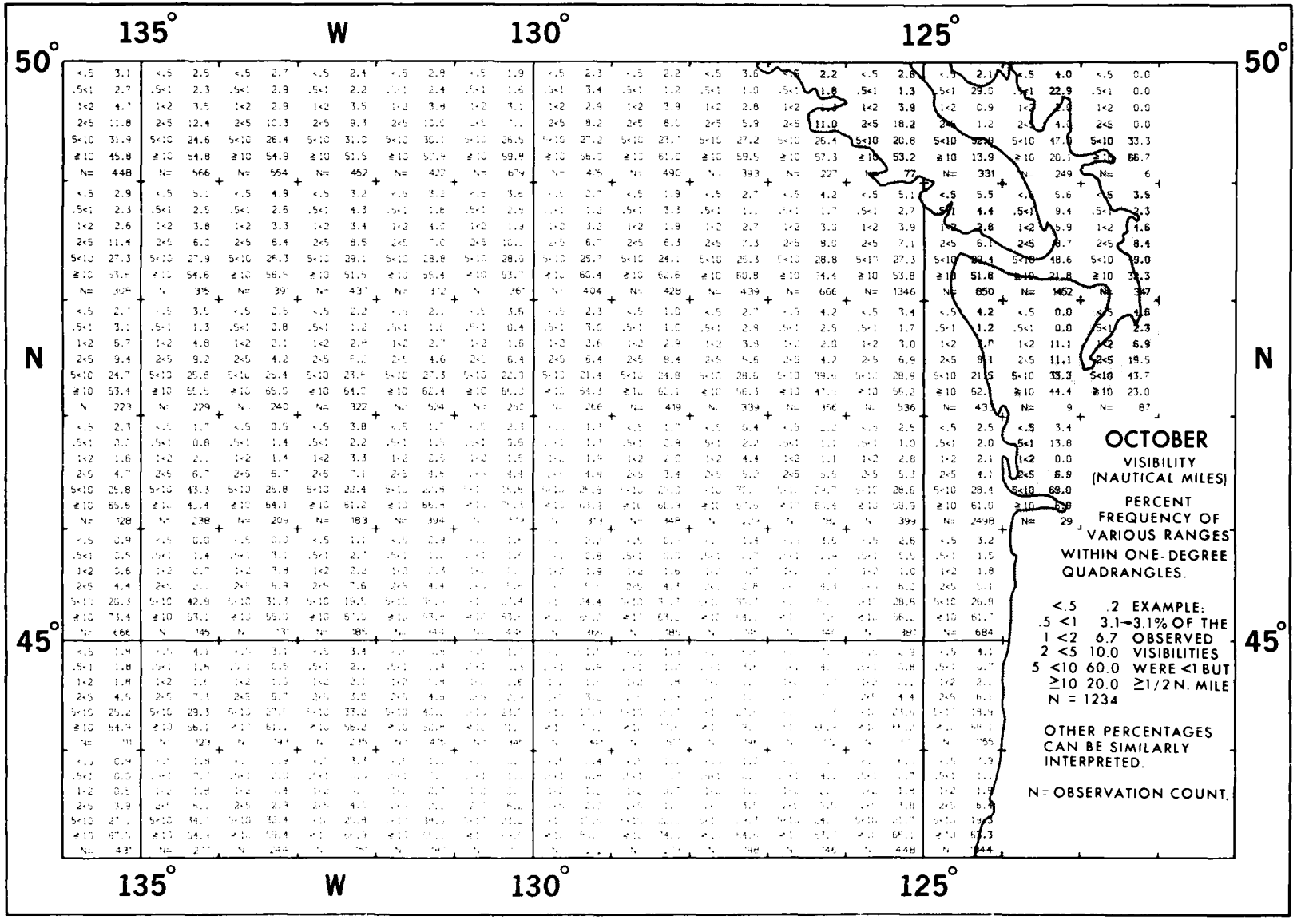

SEPTEMBER
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W 130° 125°
50°
45°
40°
35°
N
60
40
20
RESOLUTION INADEQUATE FOR ANALYSIS

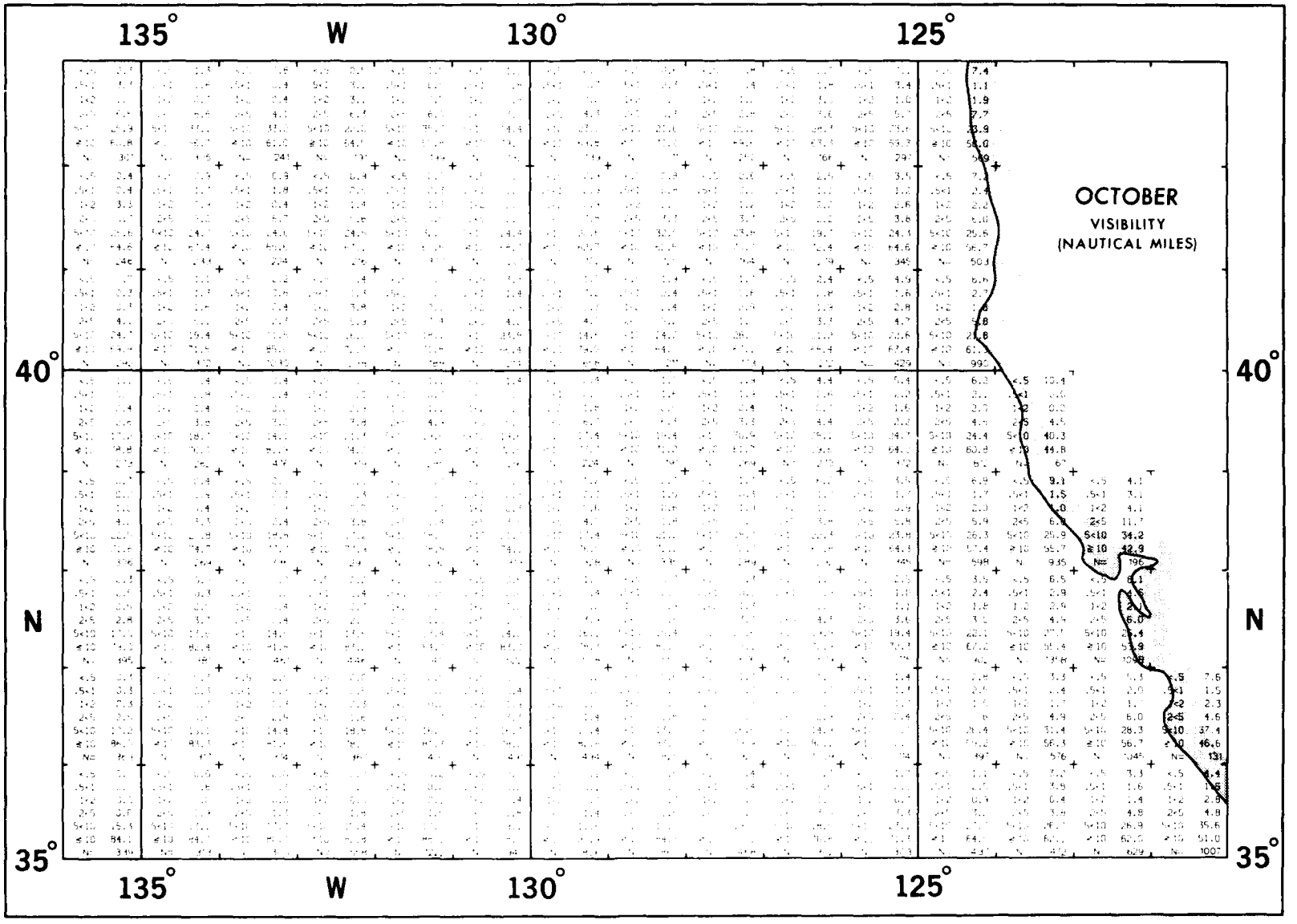

135° W 130° 125°
50°
N
45°
SEPTEMBER
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW: MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

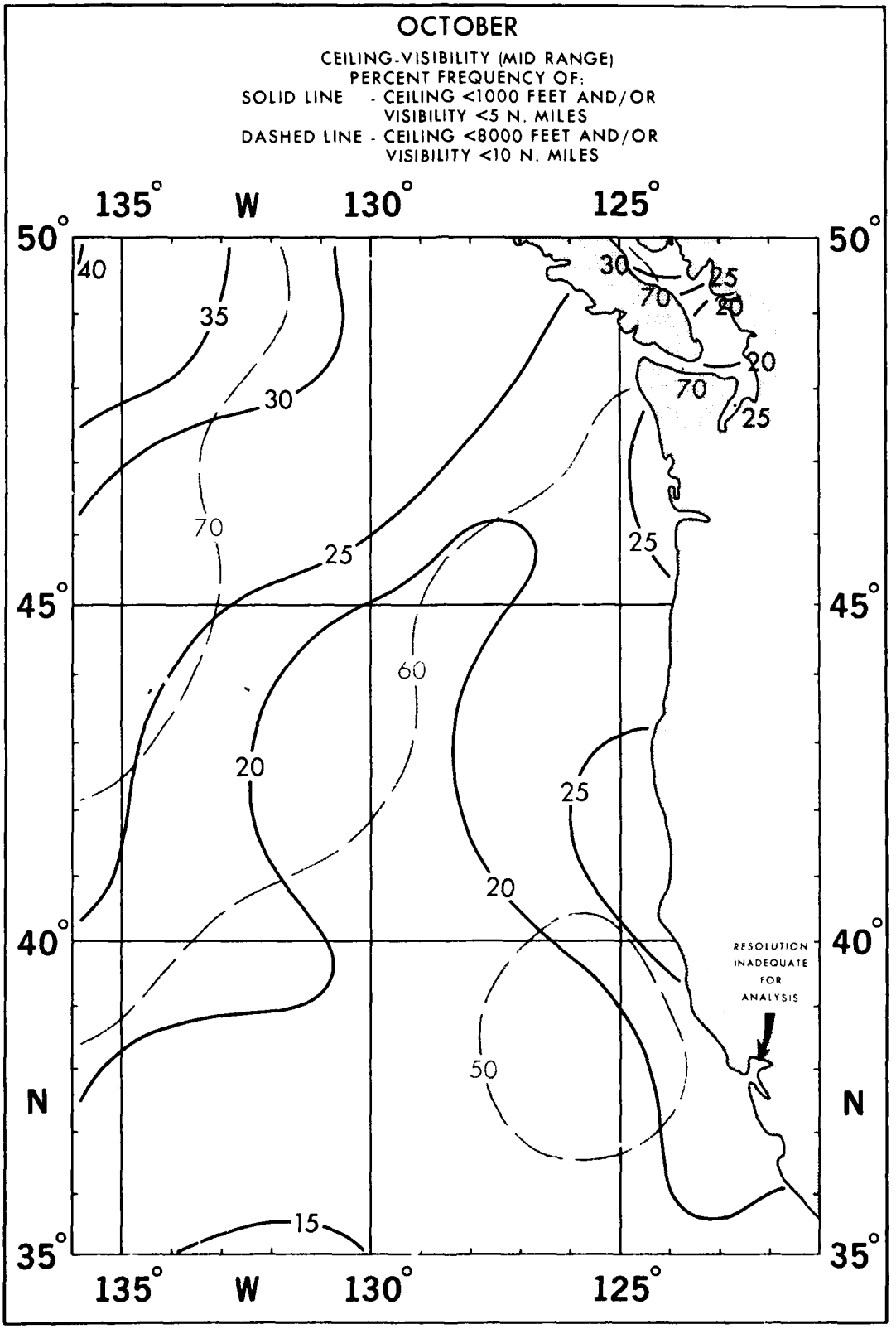

135° W 130° 125°
40°
N
35°
SEPTEMBER
SURFACE CURRENTS

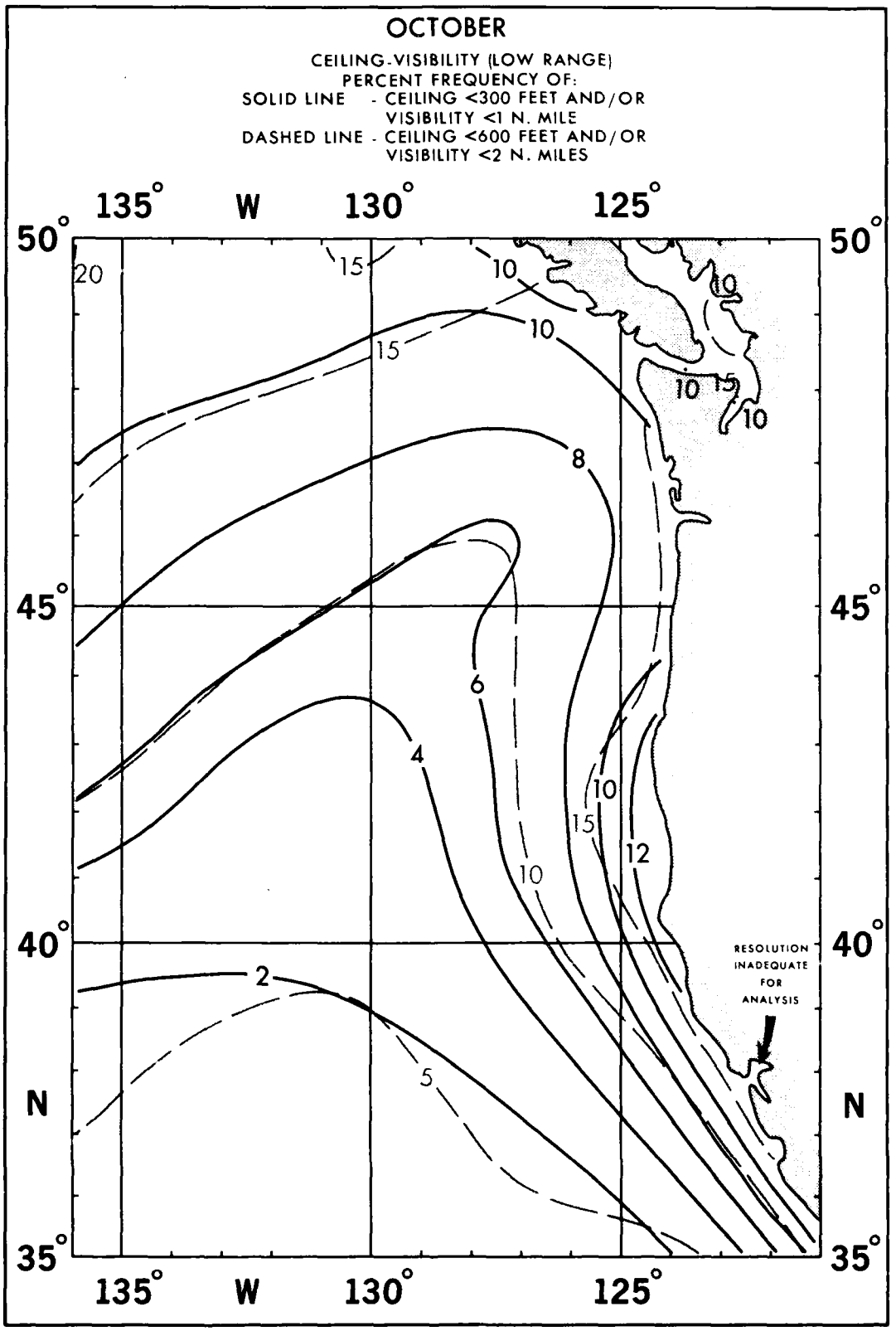

OCTOBER
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

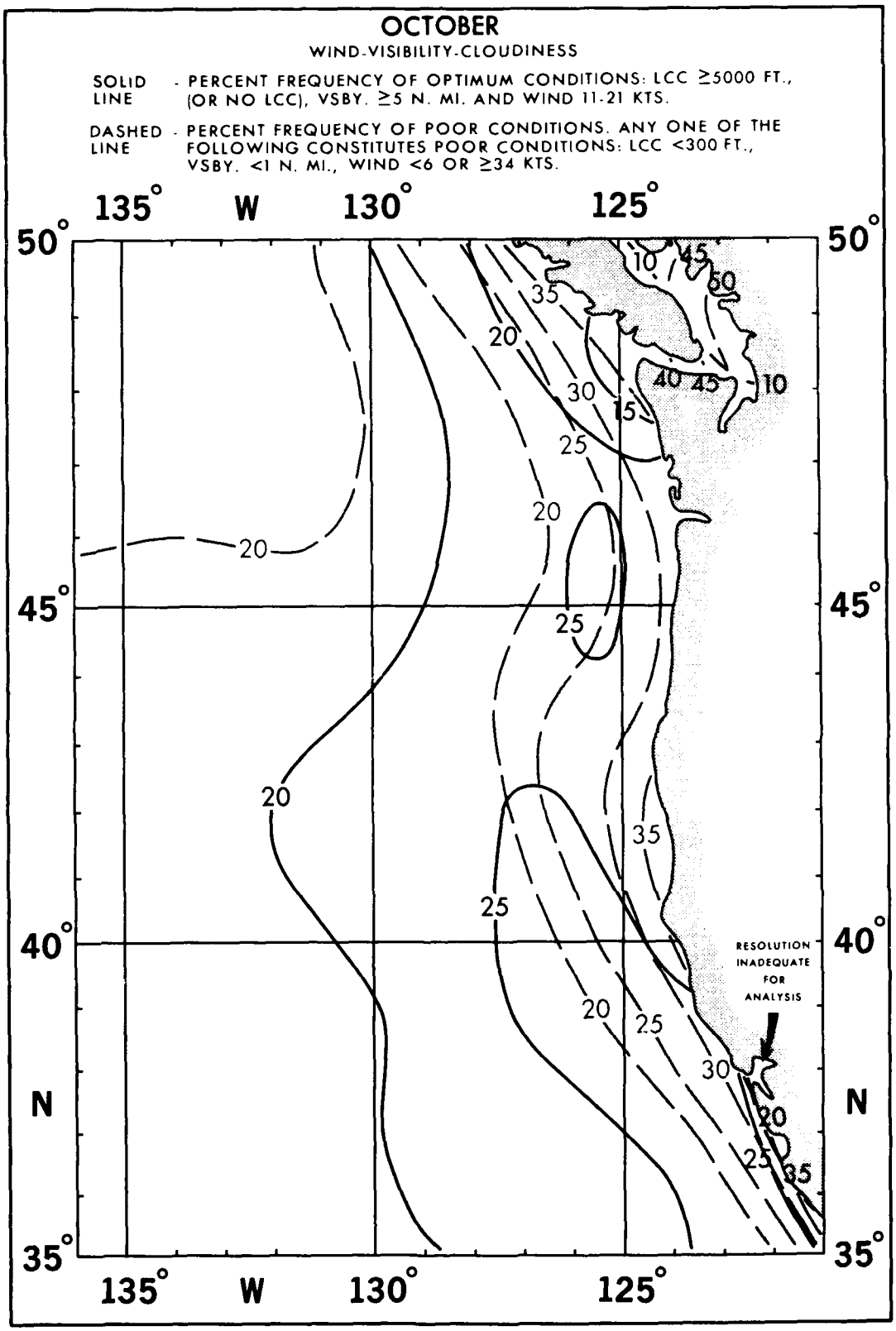

OCTOBER
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
16
17
18
15
14
13
12
11
10
9
8
7
6
5
4
3
2
RESOLUTION INADEQUATE FOR ANALYSIS

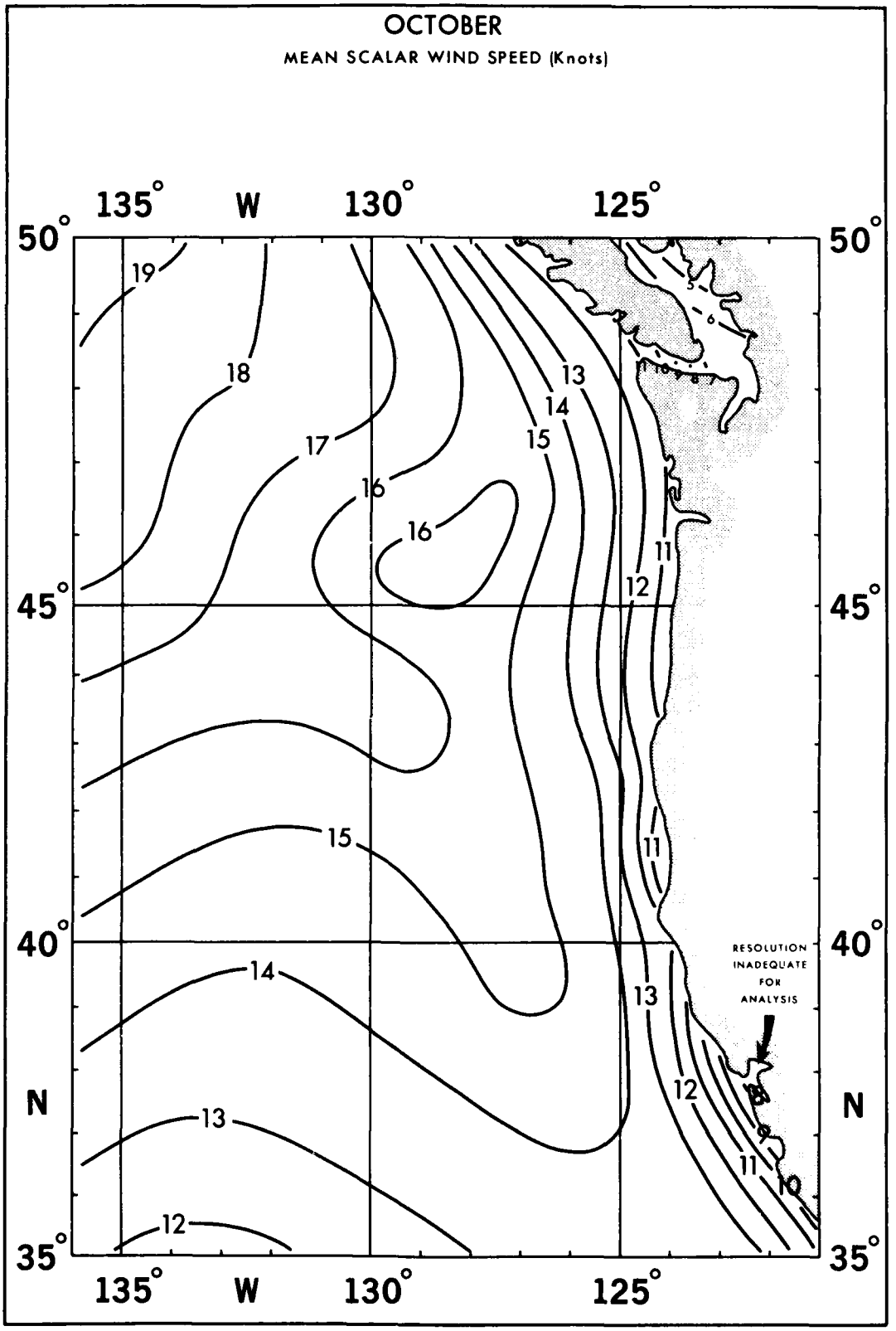

135° W 130° 125°
50°
45°
N
OCTOBER
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N = OBSERVATION COUNT.

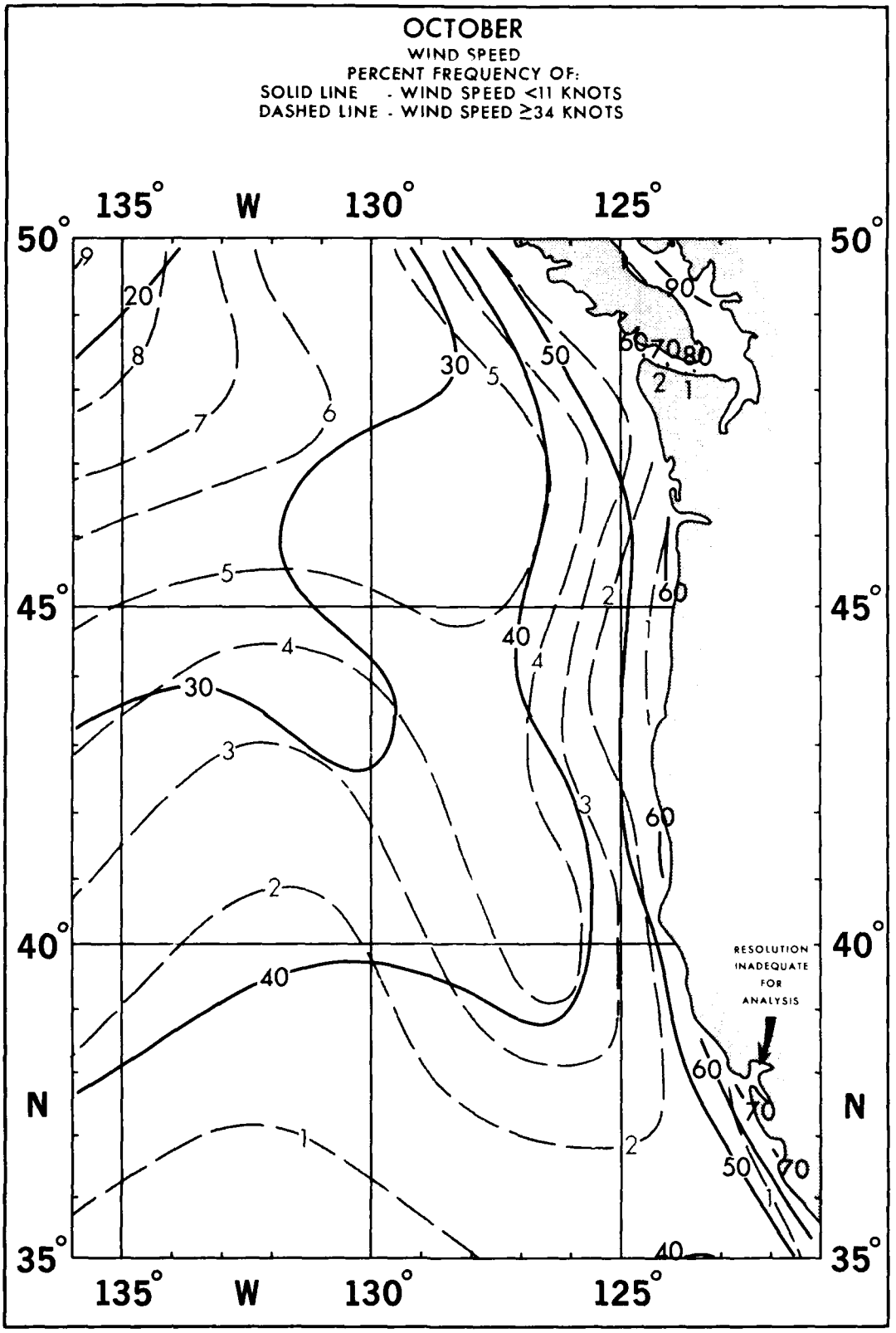

135° W 130° 125°
40° N
35°
OCTOBER
VISIBILITY
(NAUTICAL MILES)

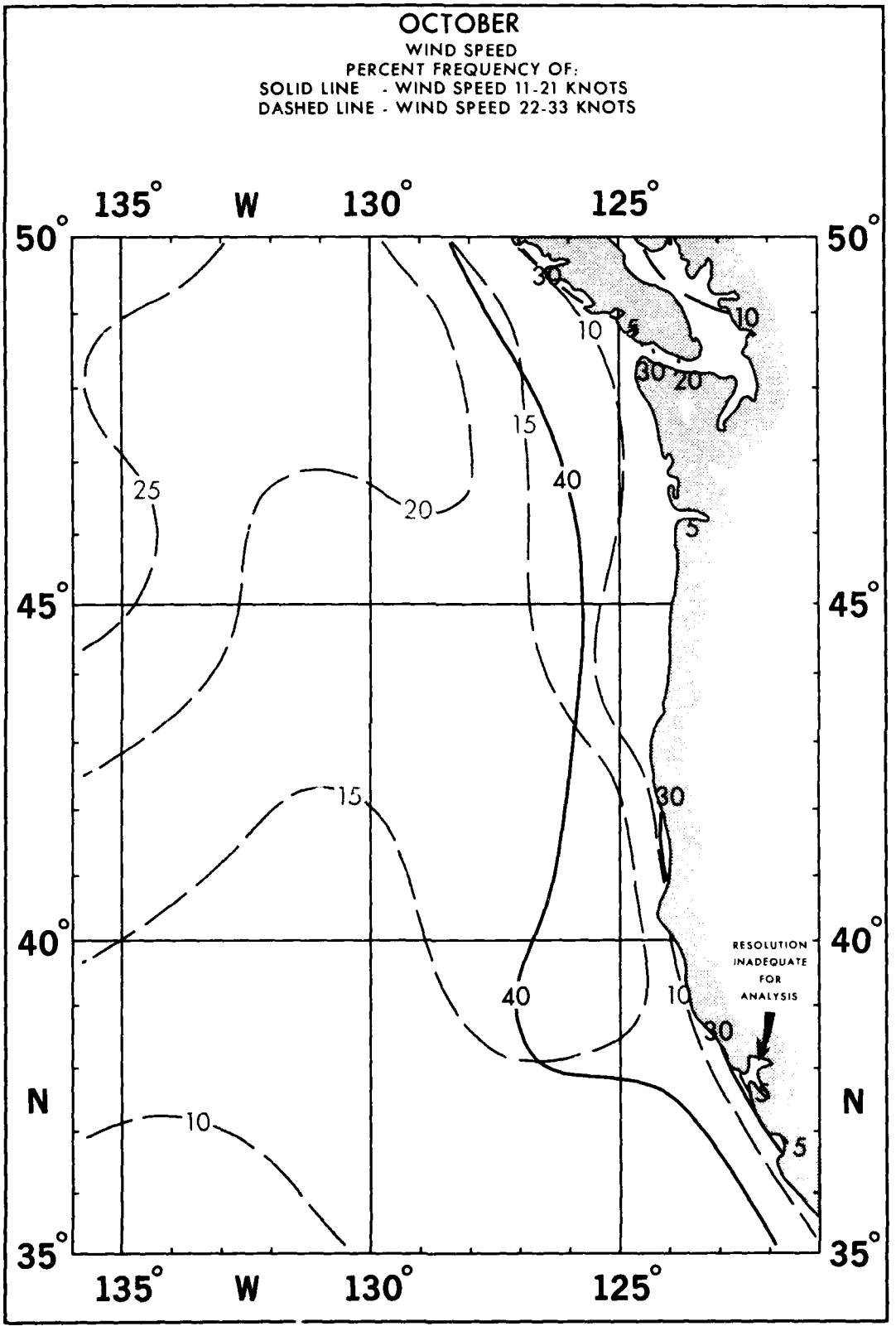

OCTOBER
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
40
35
30
25
20
70
60
50
15
RESOLUTION INADEQUATE FOR ANALYSIS

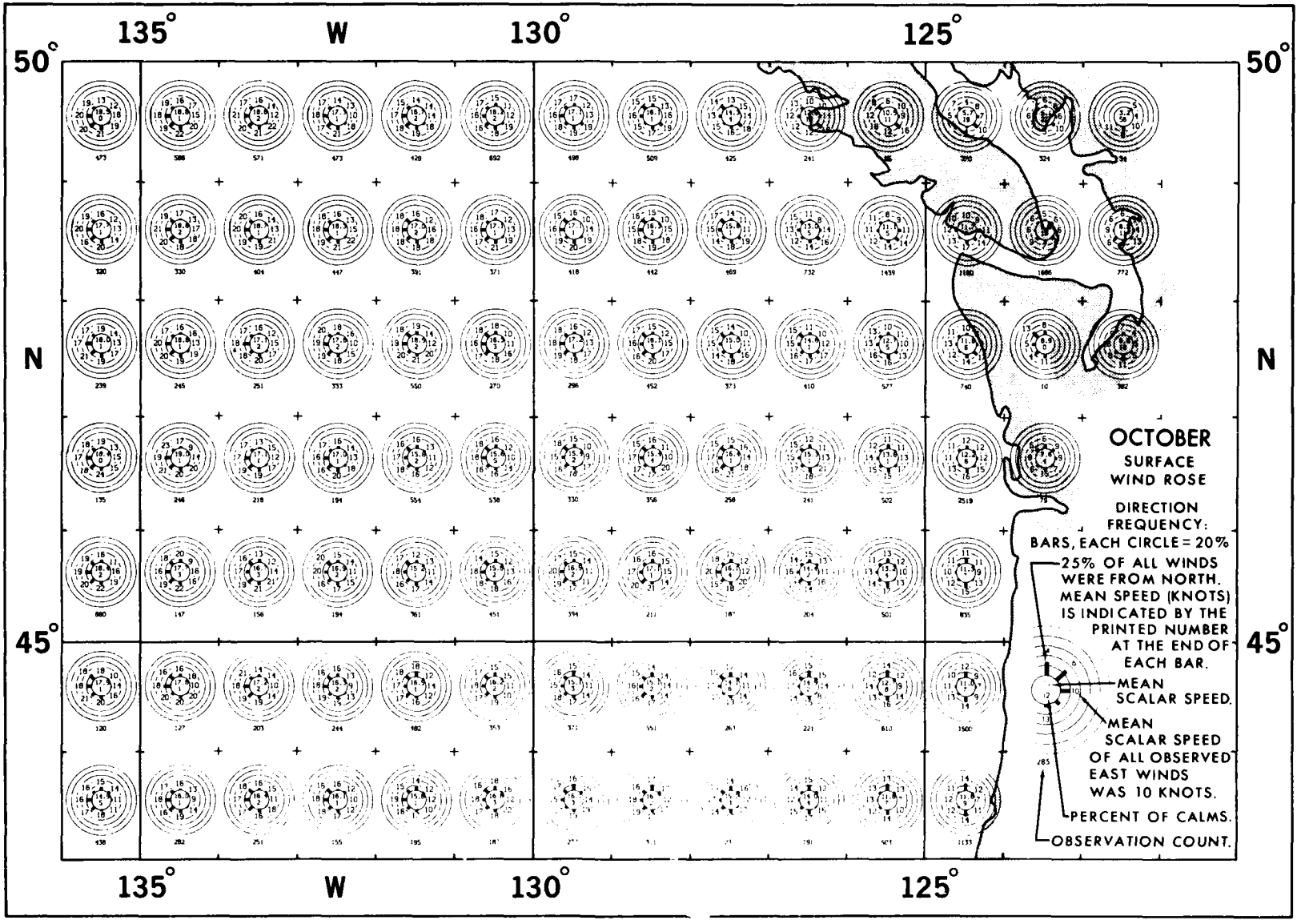

OCTOBER
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

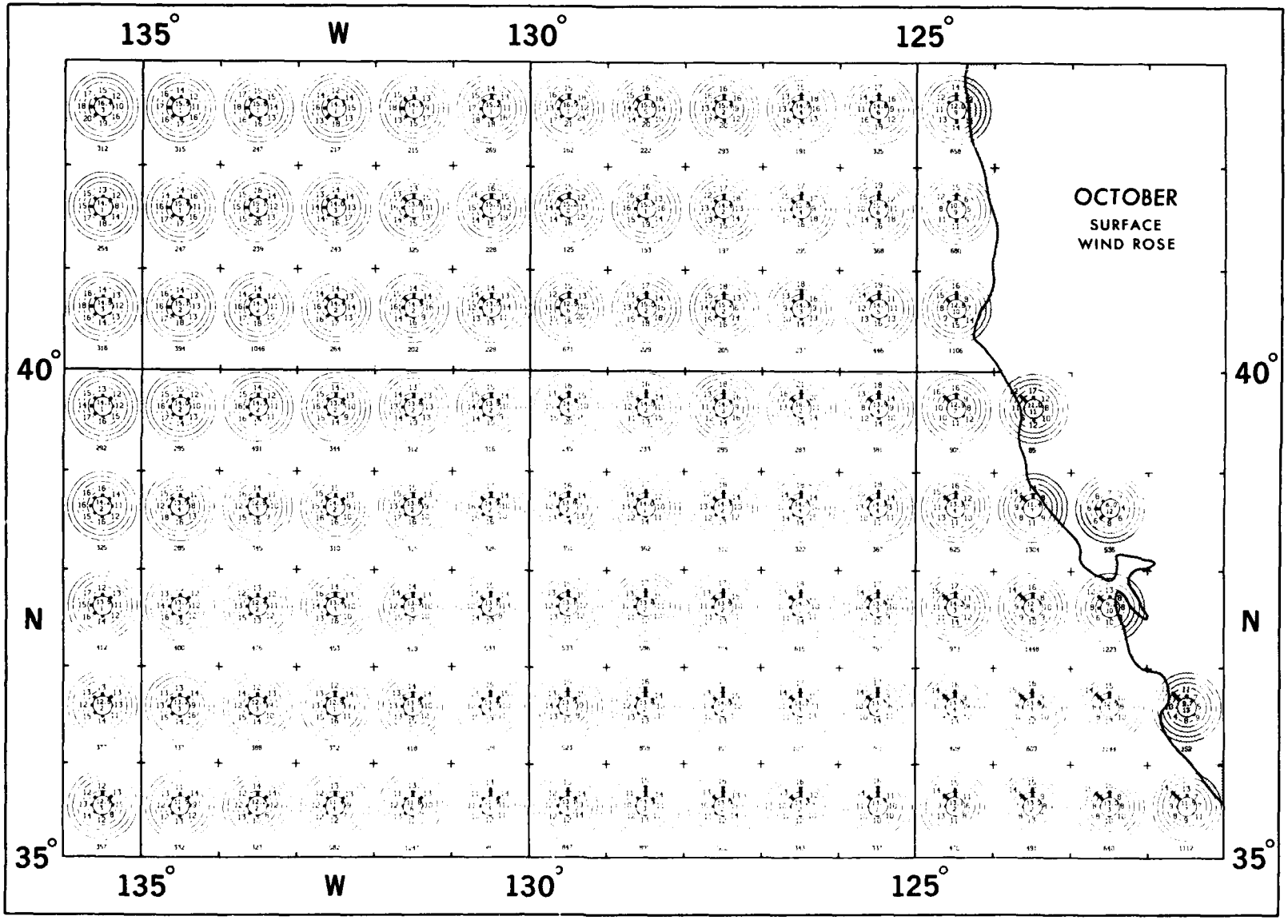

OCTOBER
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

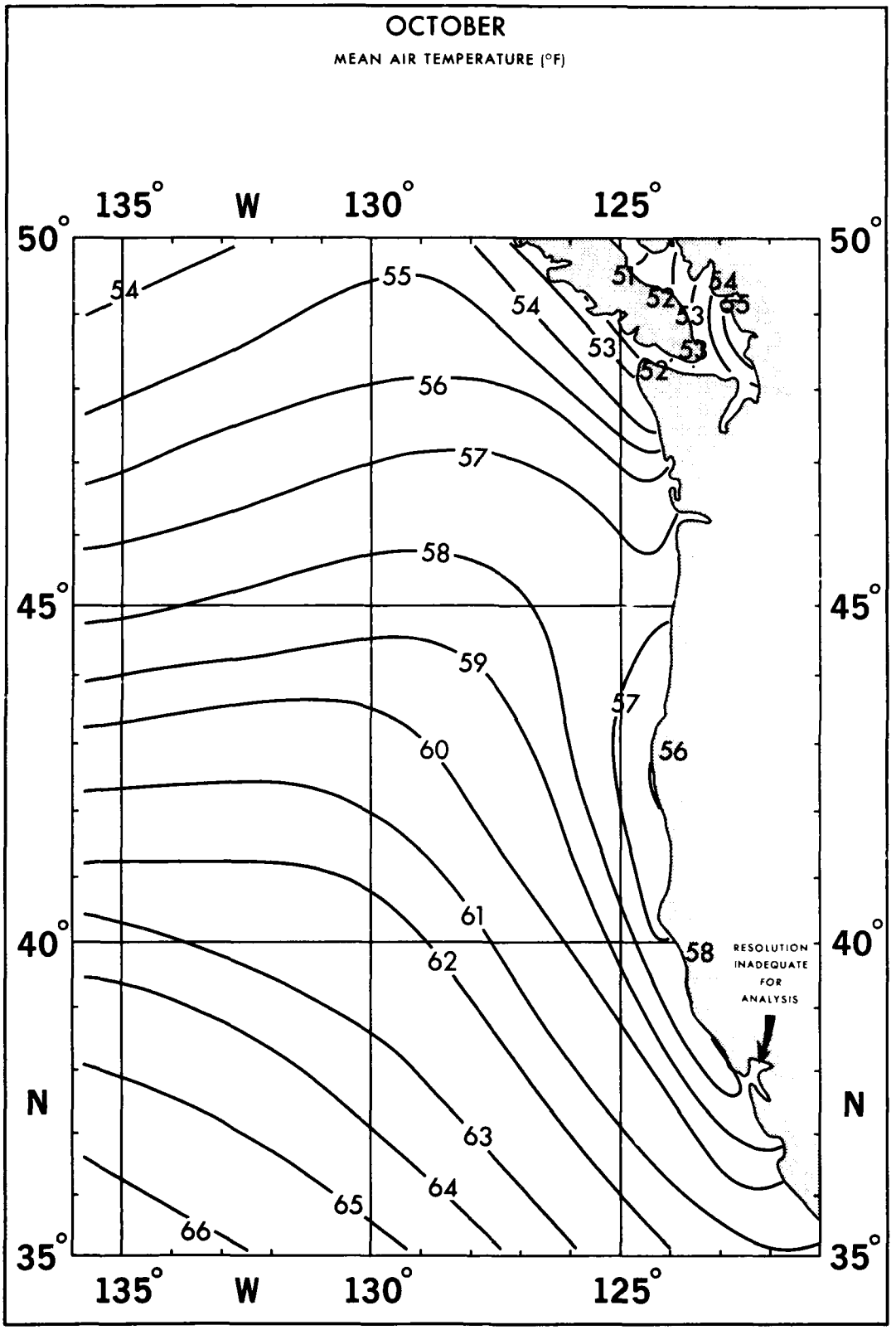

OCTOBER
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
35°
N
19
18
17
16
16
15
15
14
13
13
12
12
11
11
11
10
RESOLUTION INADEQUATE FOR ANALYSIS

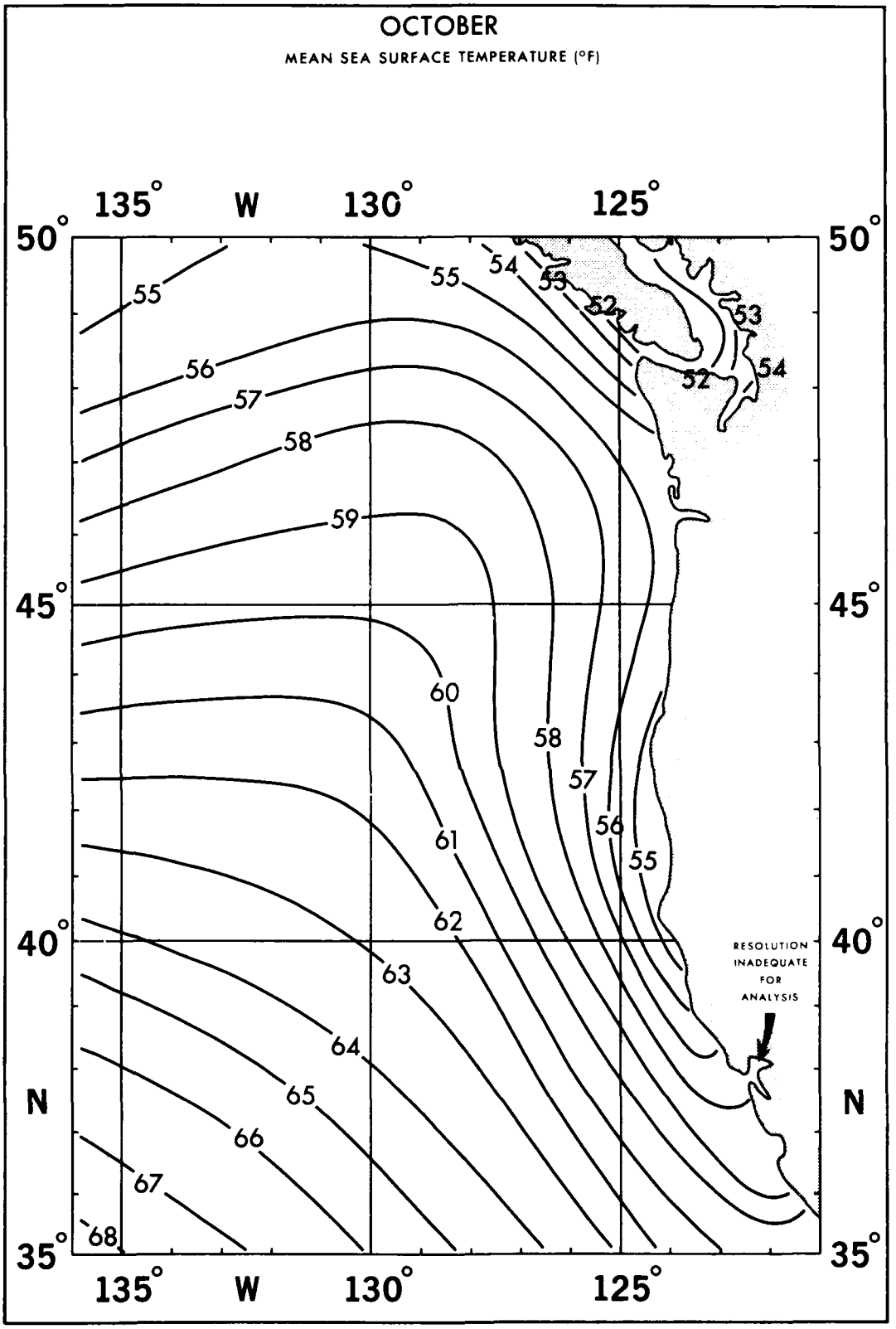

OCTOBER
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

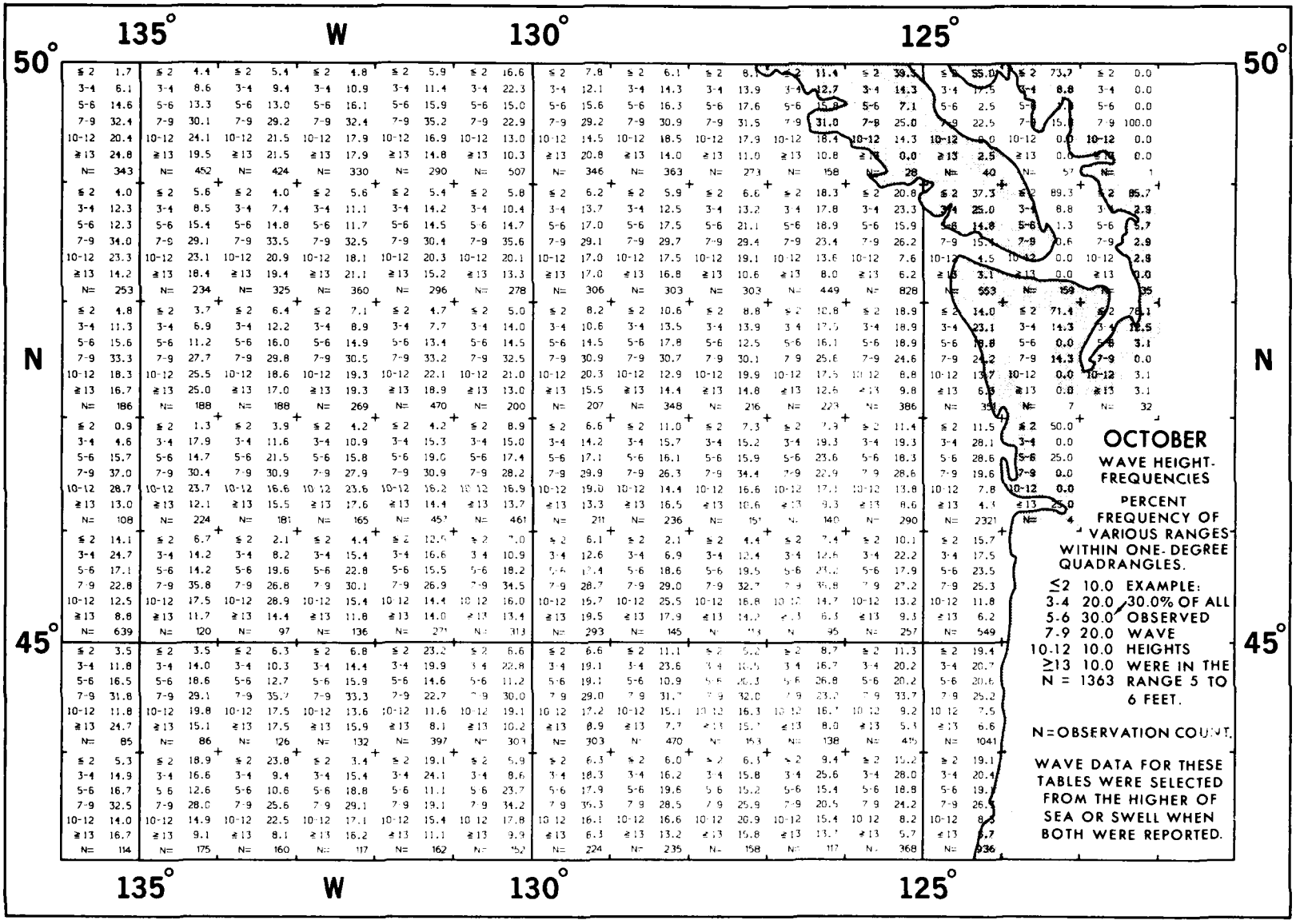

OCTOBER
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
25
20
15
10
5
30
40
RESOLUTION INADEQUATE FOR ANALYSIS

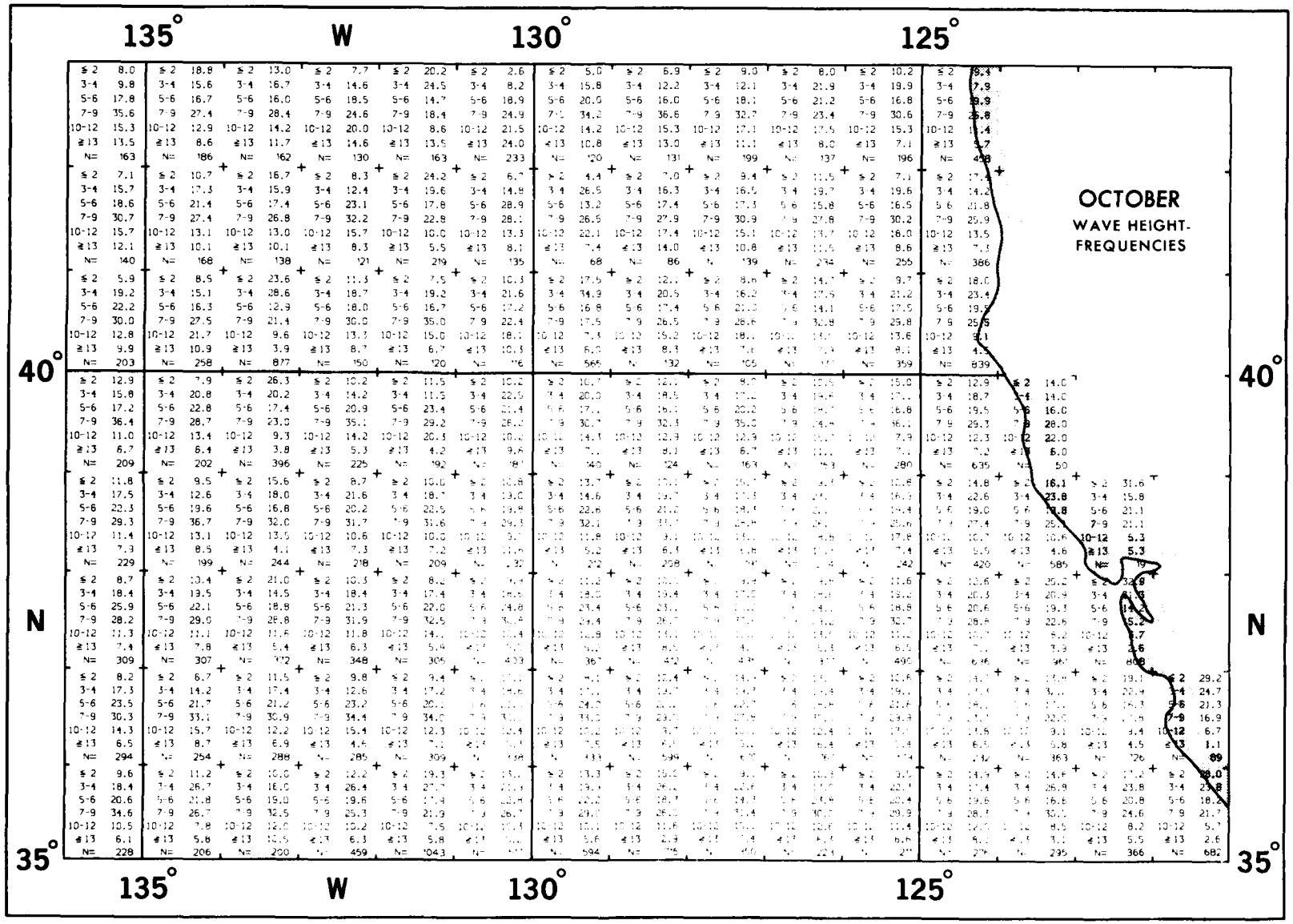

135° W 130° 125°
50°
N
45°
OCTOBER
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.


135° W 130° 125°
40° N 35°
OCTOBER
SURFACE
WIND ROSE


OCTOBER
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
54
55
56
57
58
59
60
61
62
63
64
65
66
51
52
53
RESOLUTION INADEQUATE FOR ANALYSIS


OCTOBER
MEAN SEA SURFACE TEMPERATURE (°F)
135° W
130°
125°
50°
45°
40°
35°
N
55
56
57
58
59
60
61
62
63
64
65
66
67
68
54
53
52
RESOLUTION INADEQUATE FOR ANALYSIS

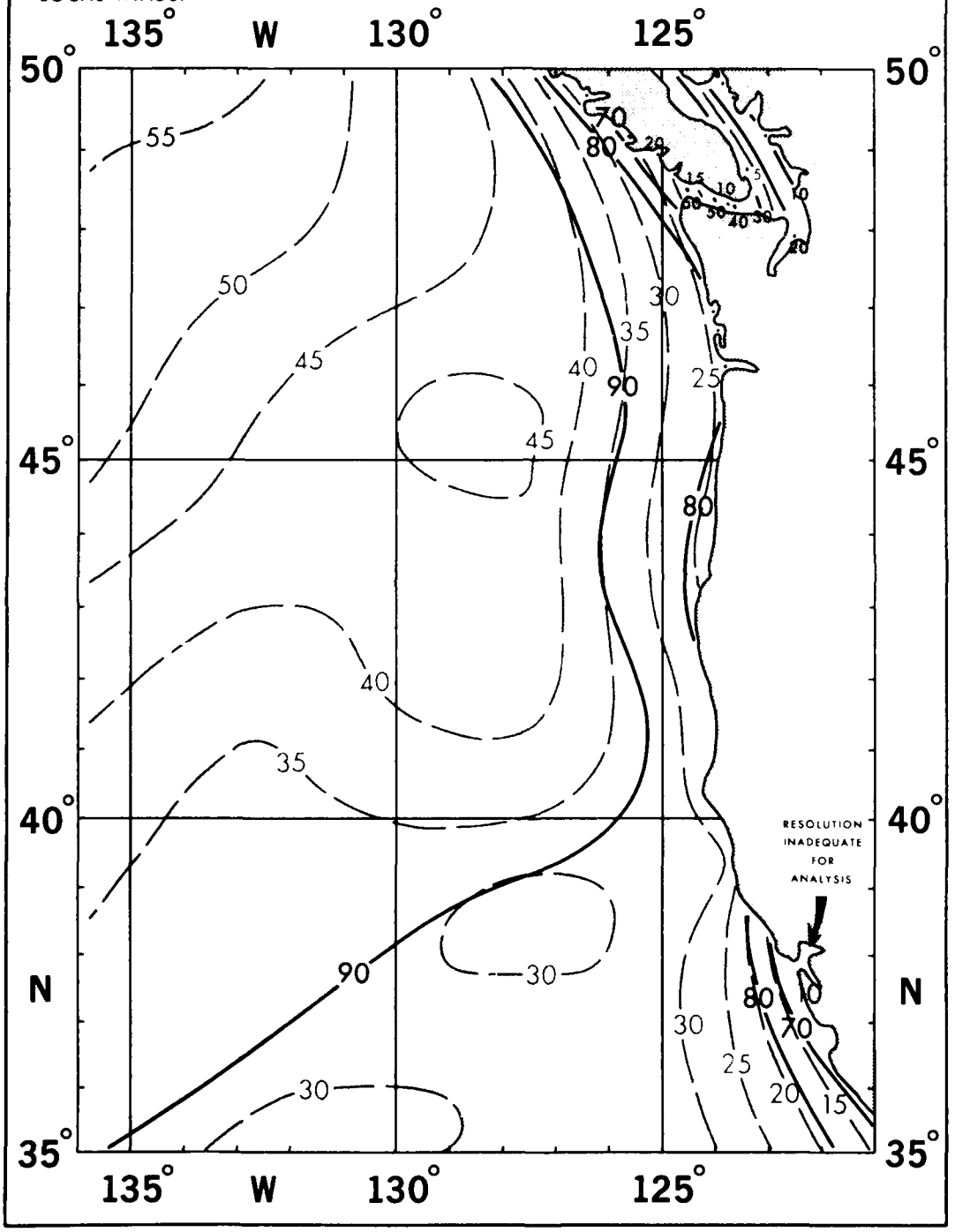

135° W 130° 125°
50°
45°
N
OCTOBER
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

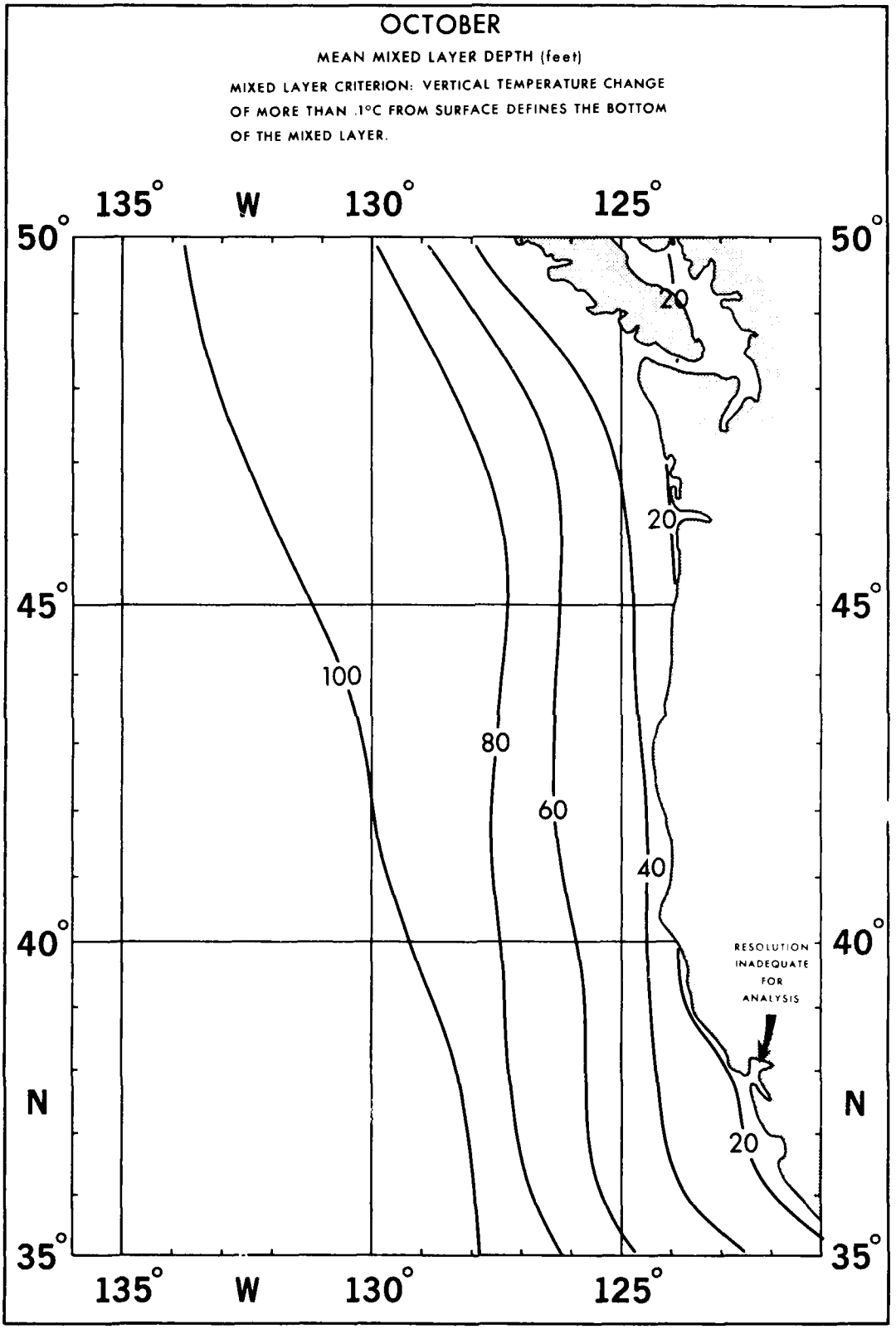

135° W 130° 125°
40°
N
35°
OCTOBER
WAVE HEIGHT-
FREQUENCIES

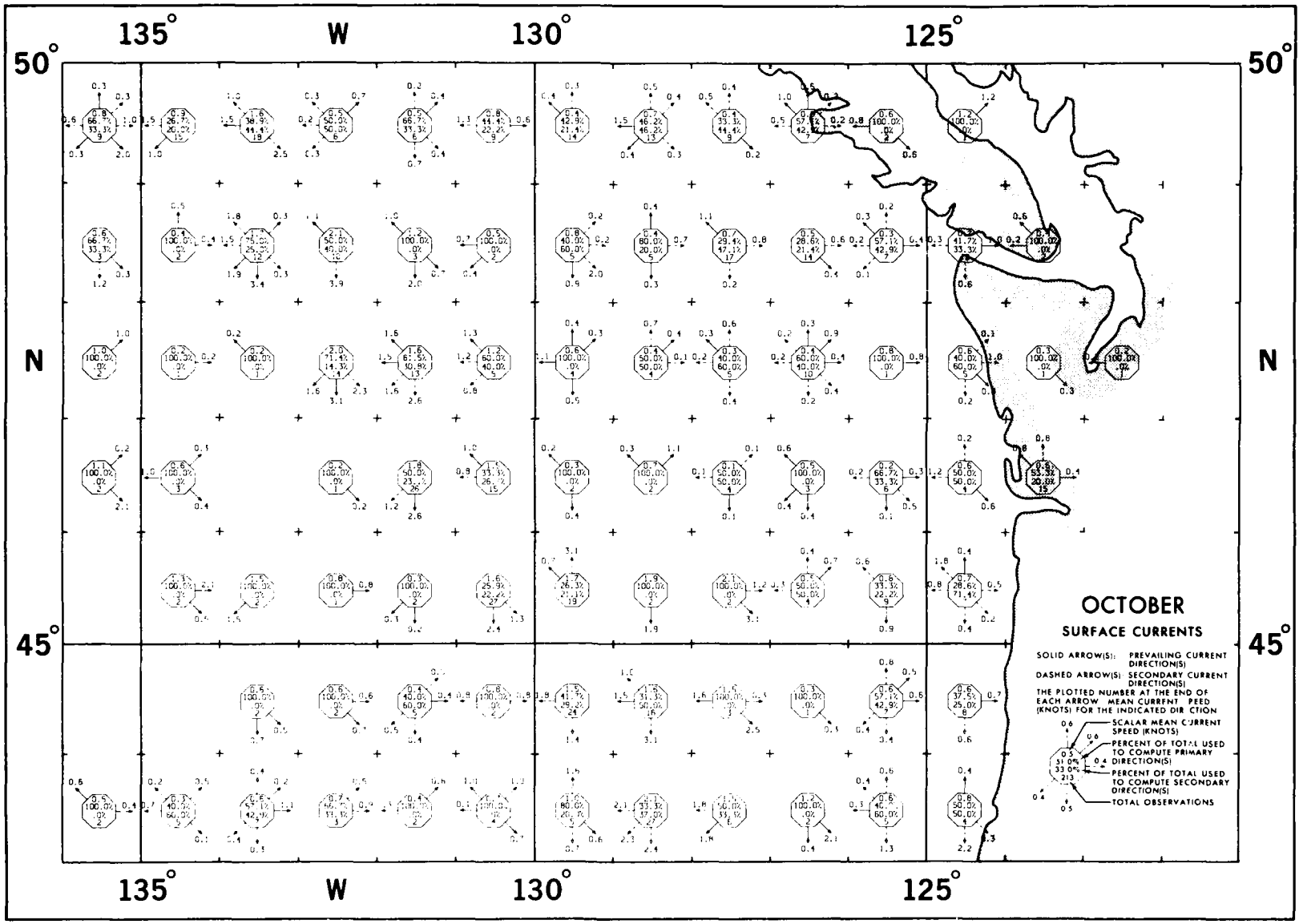
OCTOBER

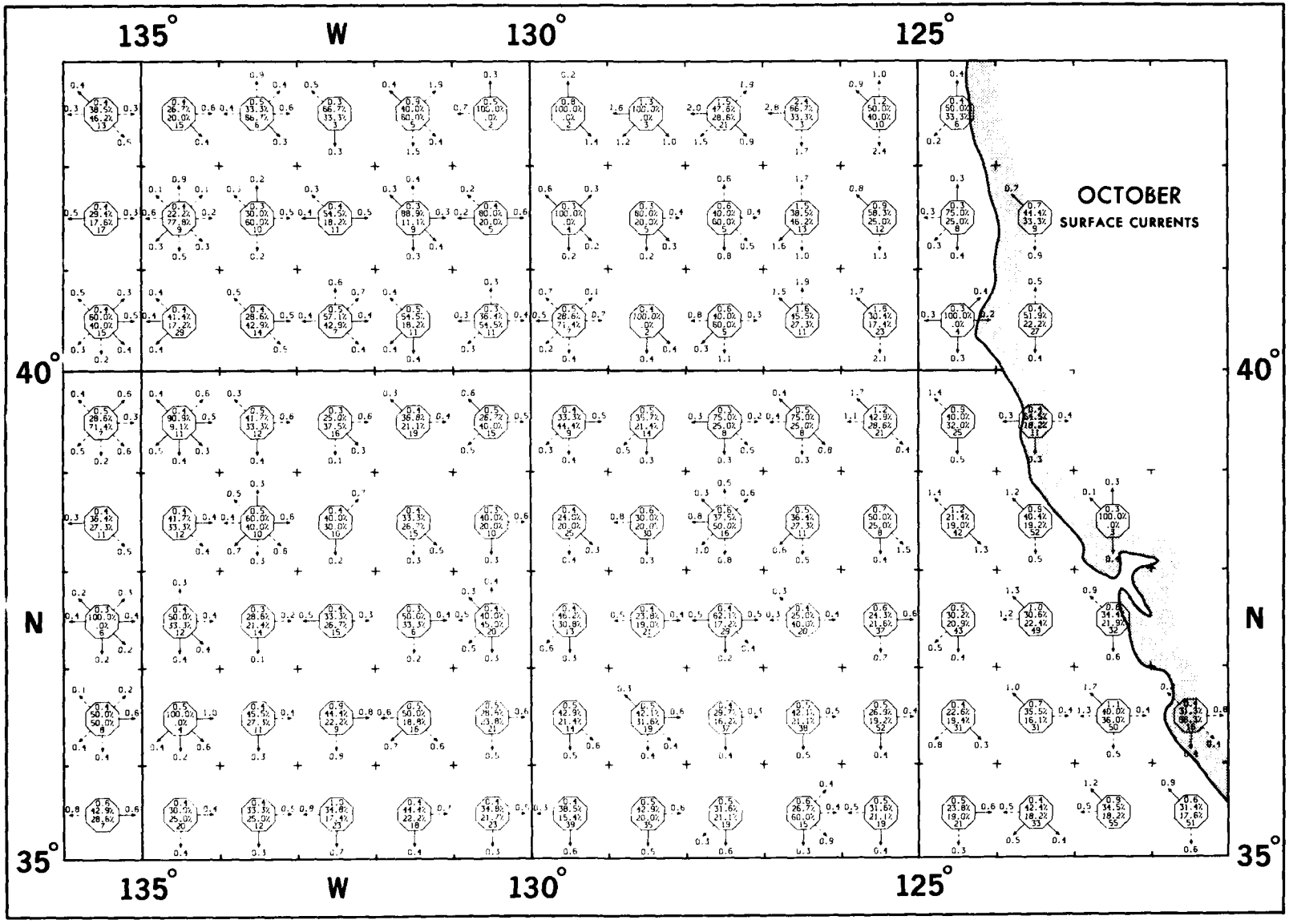
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)

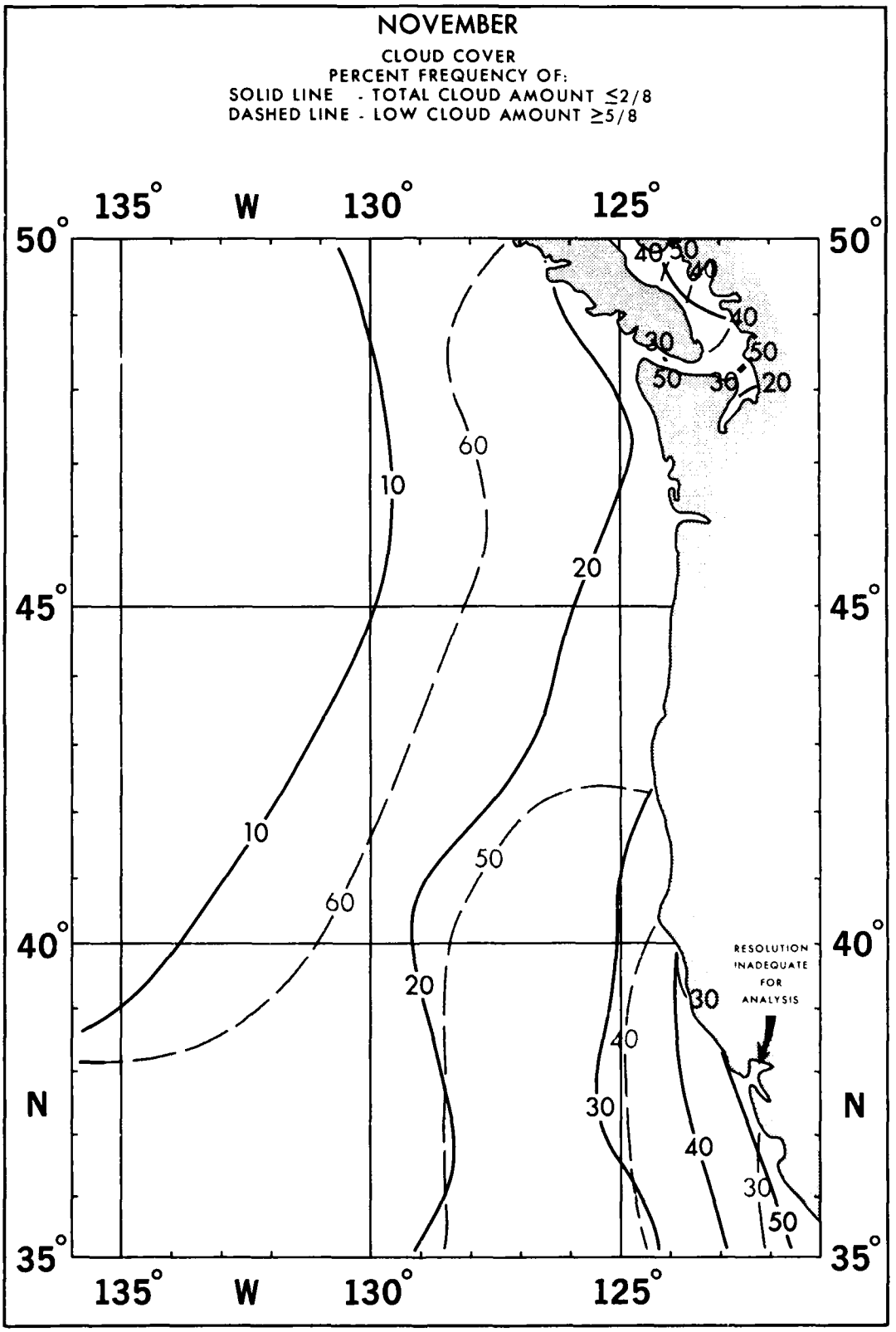
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.

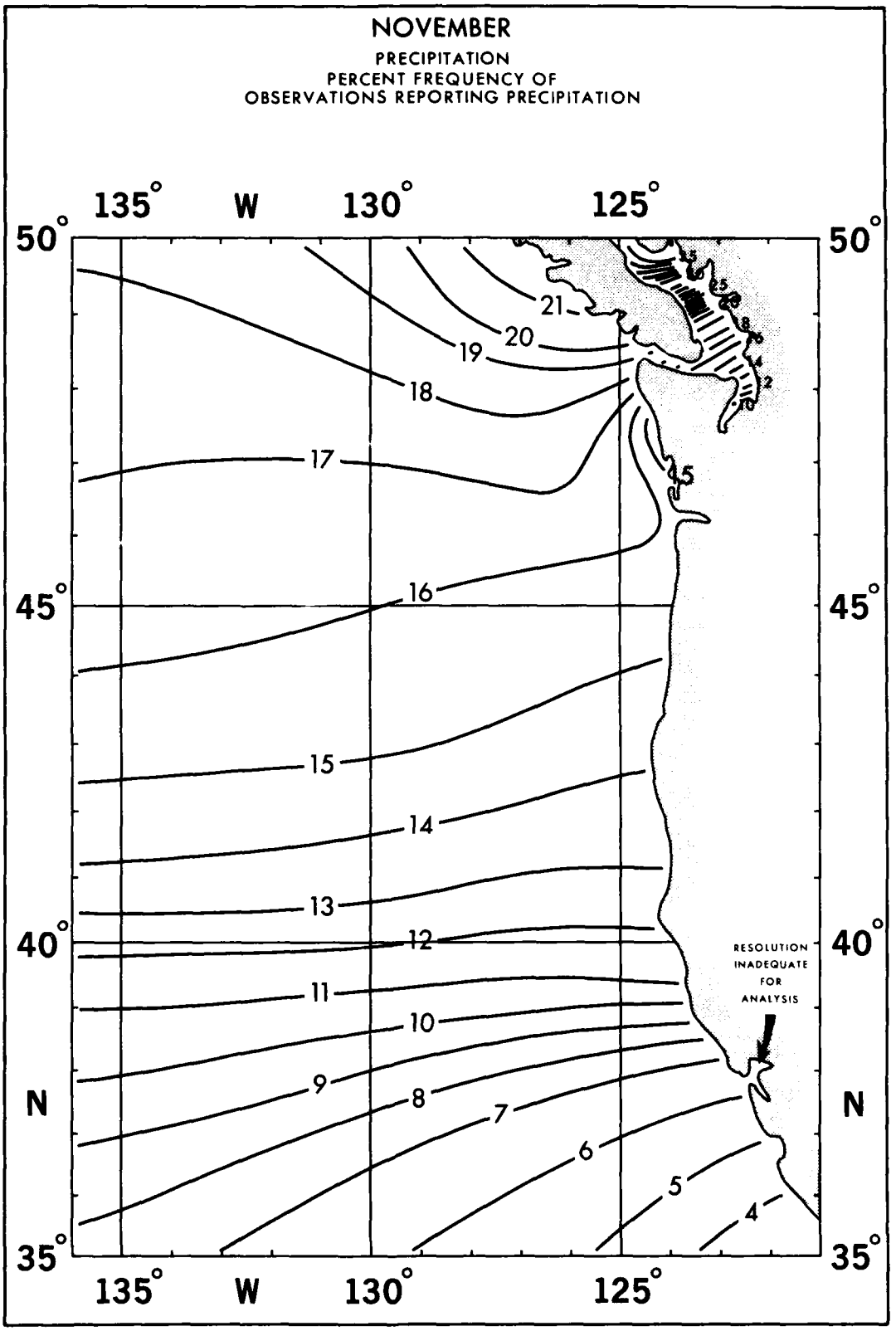


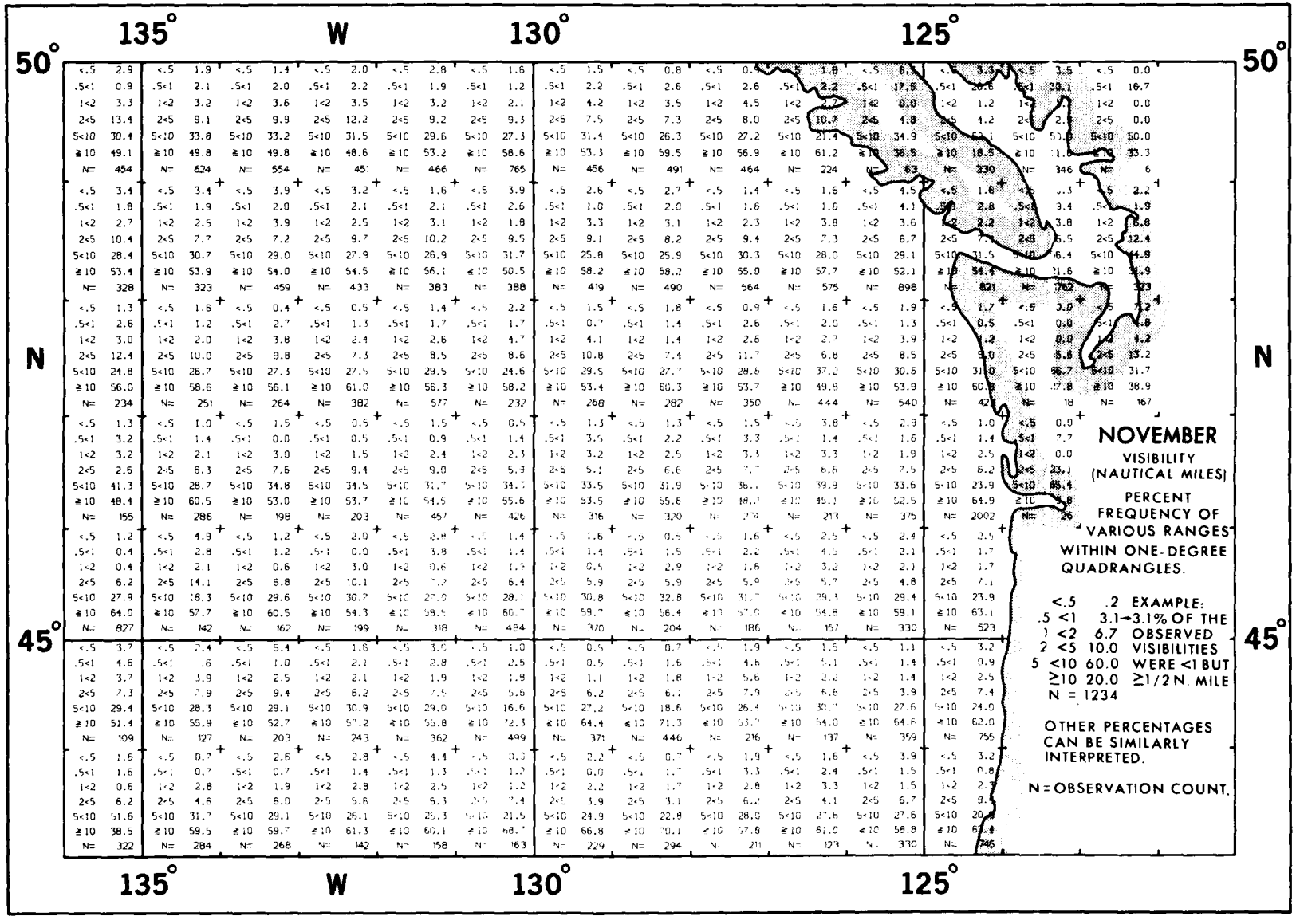

OCTOBER
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W
130°
125°
50°
45°
40°
35°
N
20
20
100
80
60
40
20
RESOLUTION INADEQUATE FOR ANALYSIS

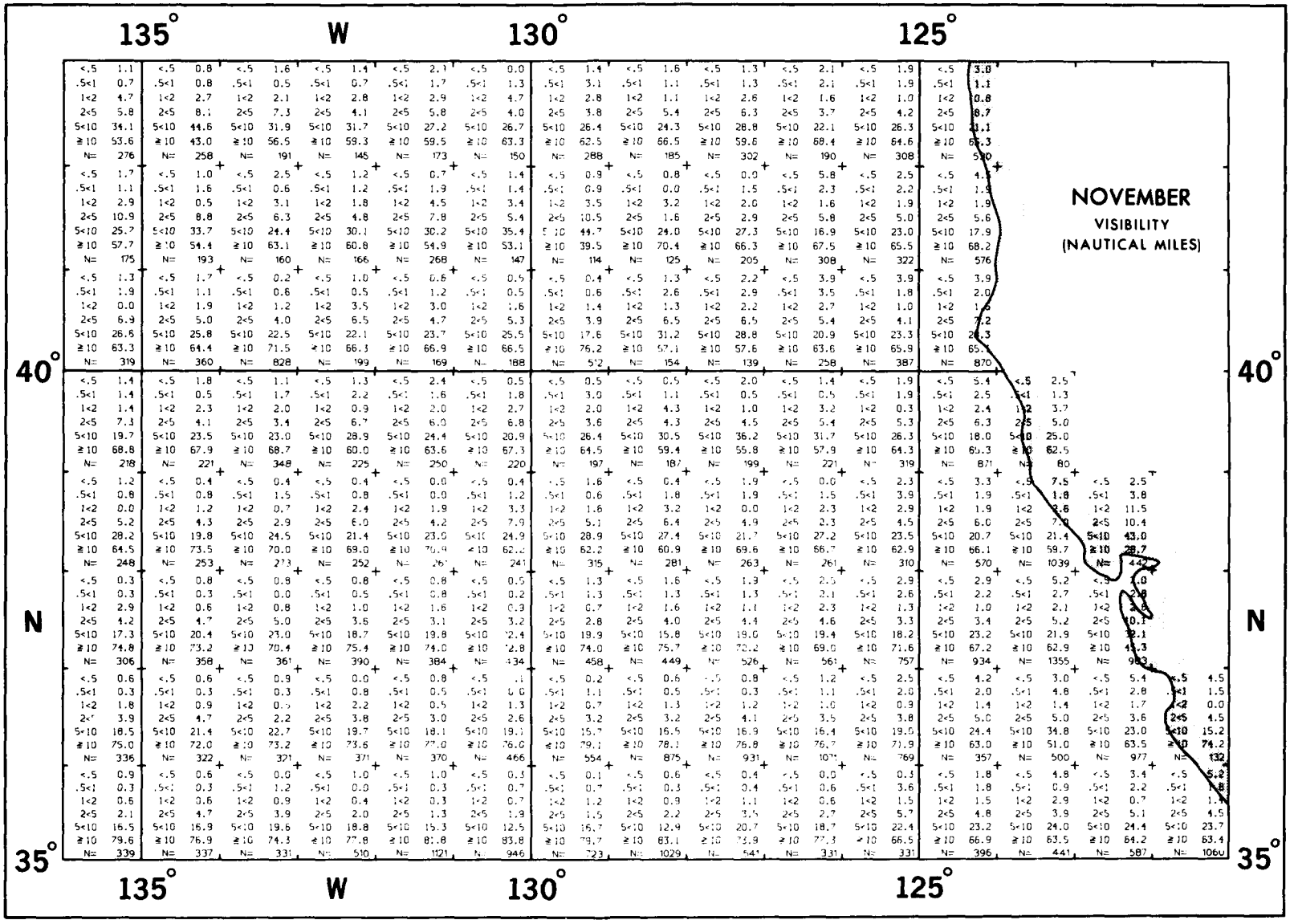

135° W 130° 125°
50°
N
45°
OCTOBER
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW MEAN CURRENT PEED (KNOTS) FOR THE INDICATED DIR CTION
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

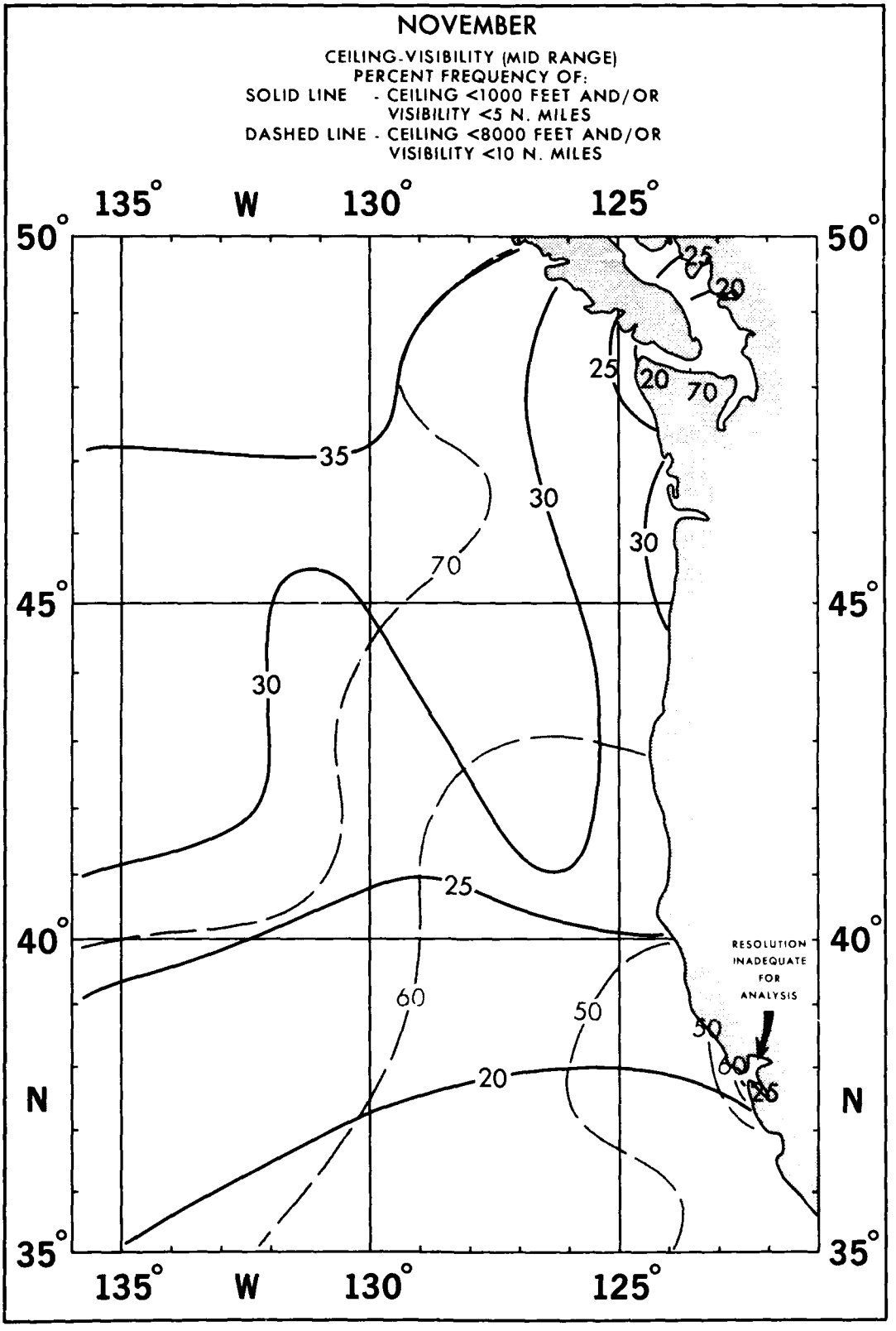

135° W 130° 125°
40°
N
35°
OCTOBER
SURFACE CURRENTS

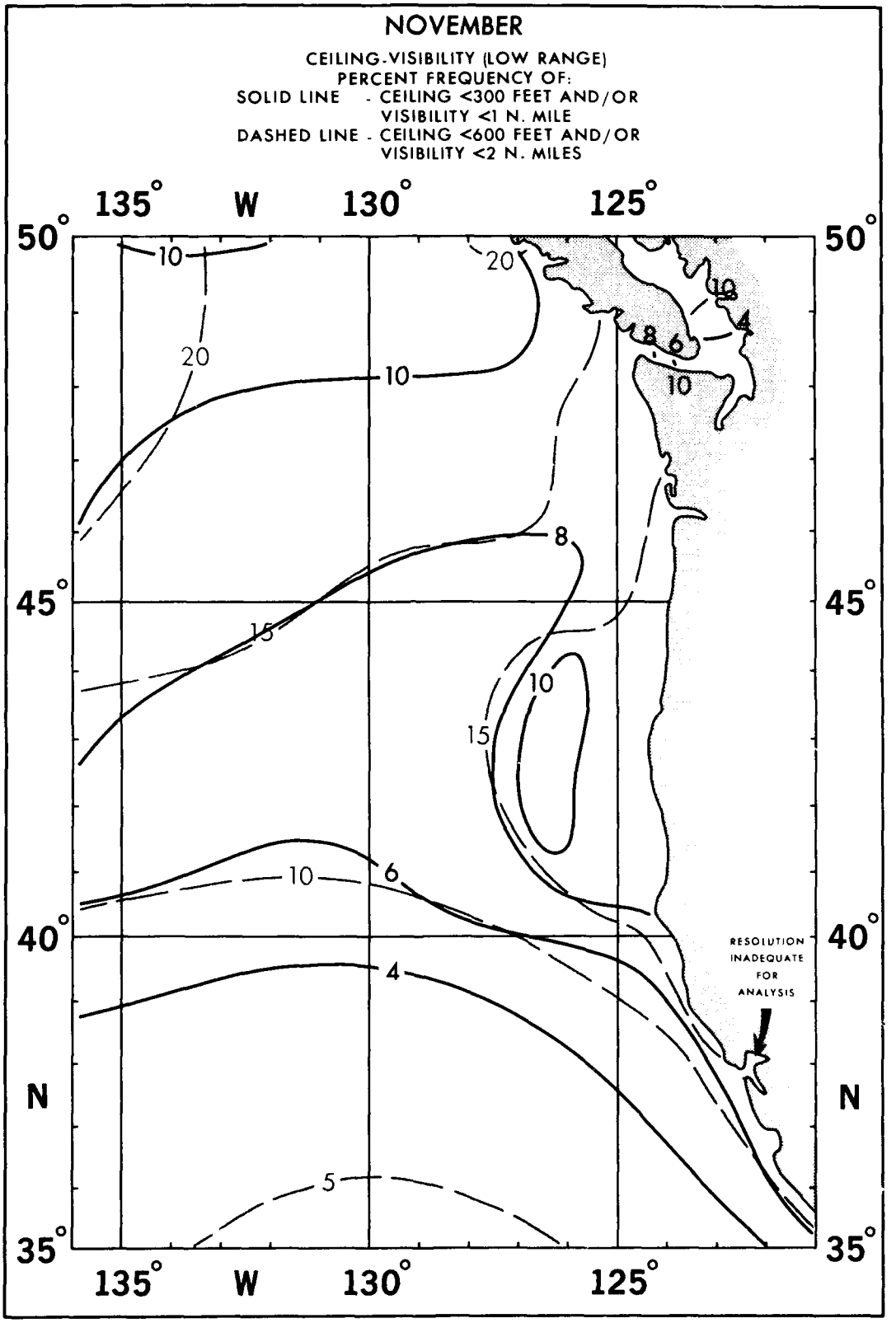

NOVEMBER
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
N
35°
10
20
60
50
40
30
RESOLUTION INADEQUATE FOR ANALYSIS

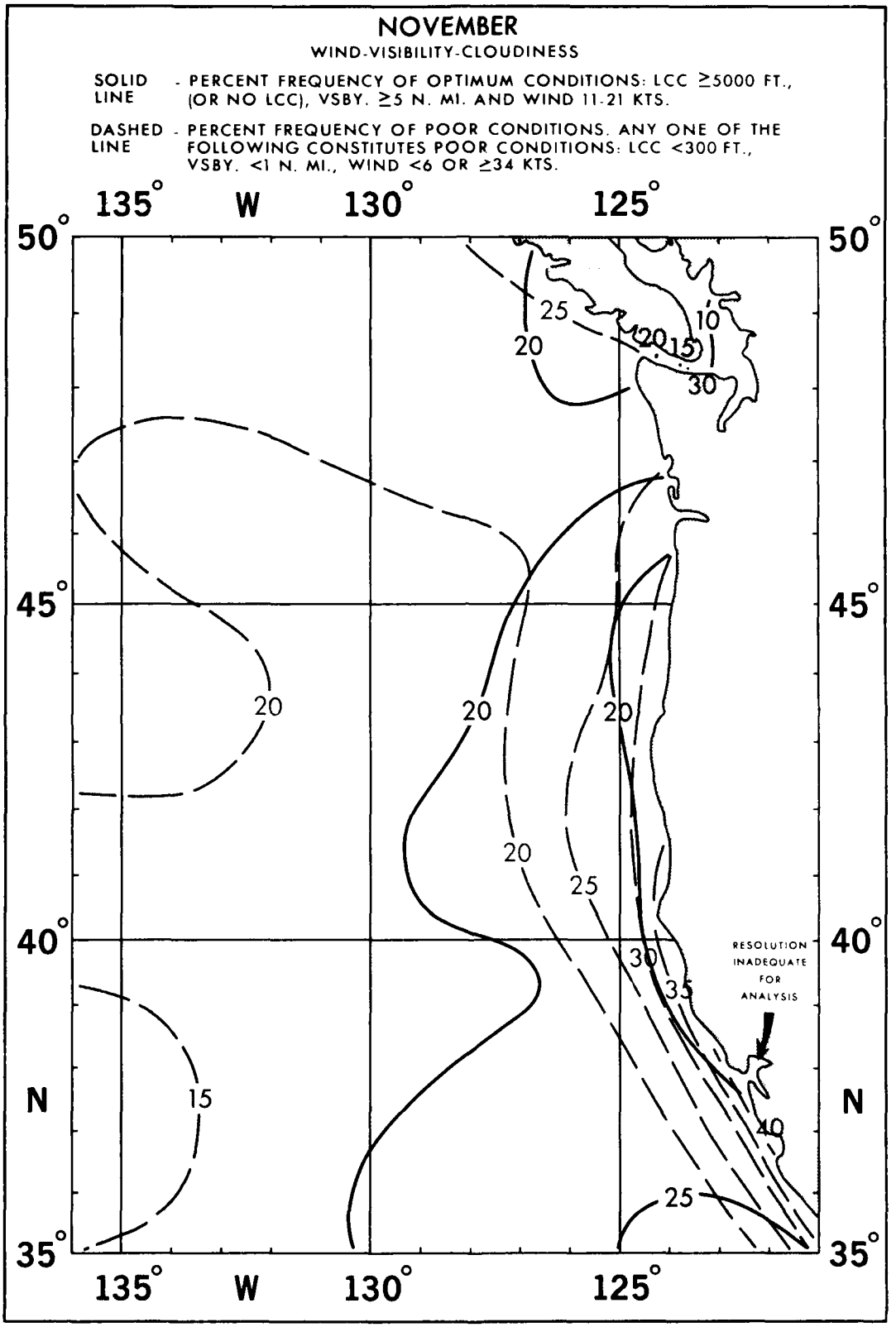

NOVEMBER
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
RESOLUTION INADEQUATE FOR ANALYSIS

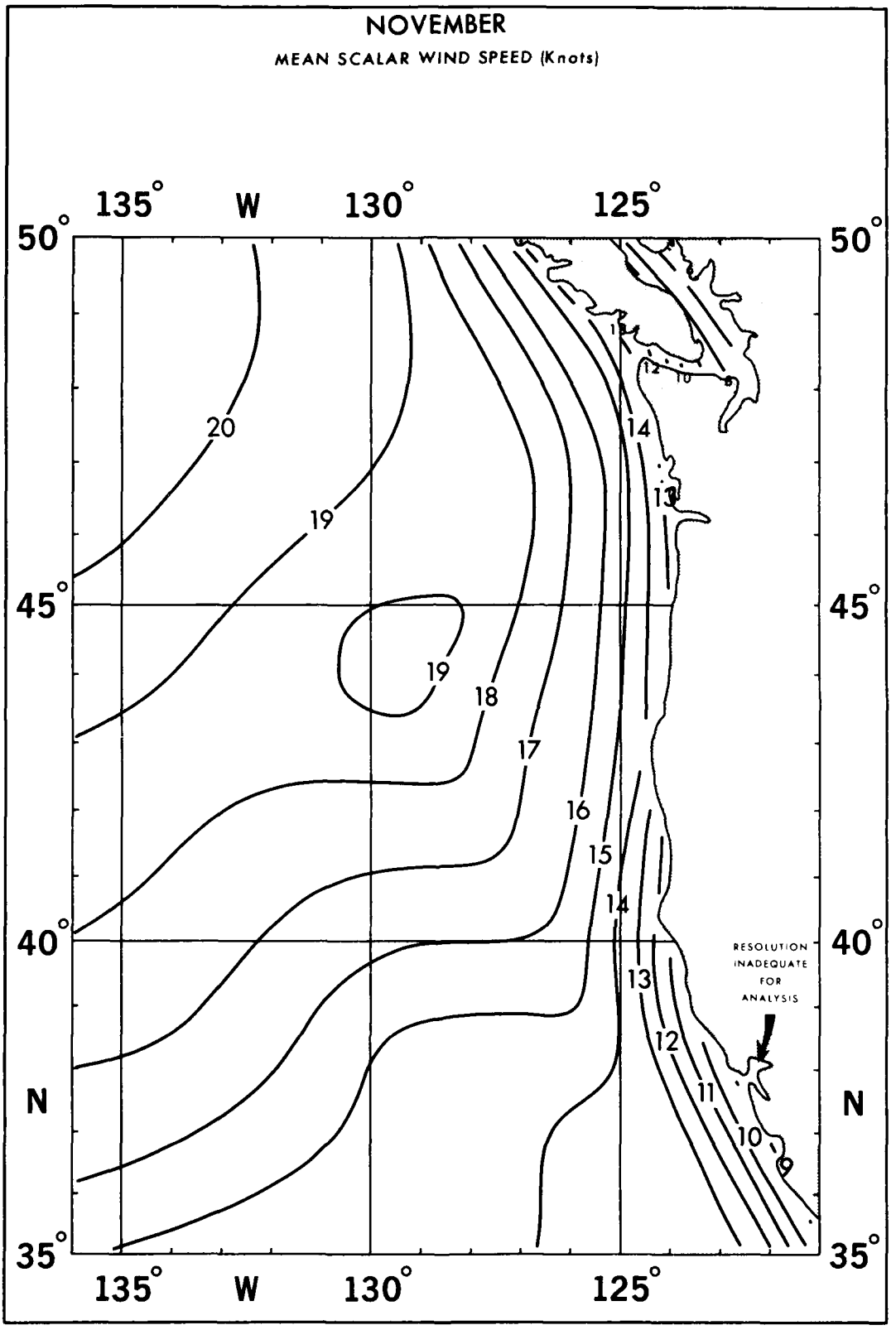

135° W 130° 125°
50°
N
45°
NOVEMBER
VISIBILITY
(NAUTICAL MILES)
PERCENT
FREQUENCY OF
VARIOUS RANGES
WITHIN ONE-DEGREE
QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20.0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES
CAN BE SIMILARLY
INTERPRETED.
N = OBSERVATION COUNT.

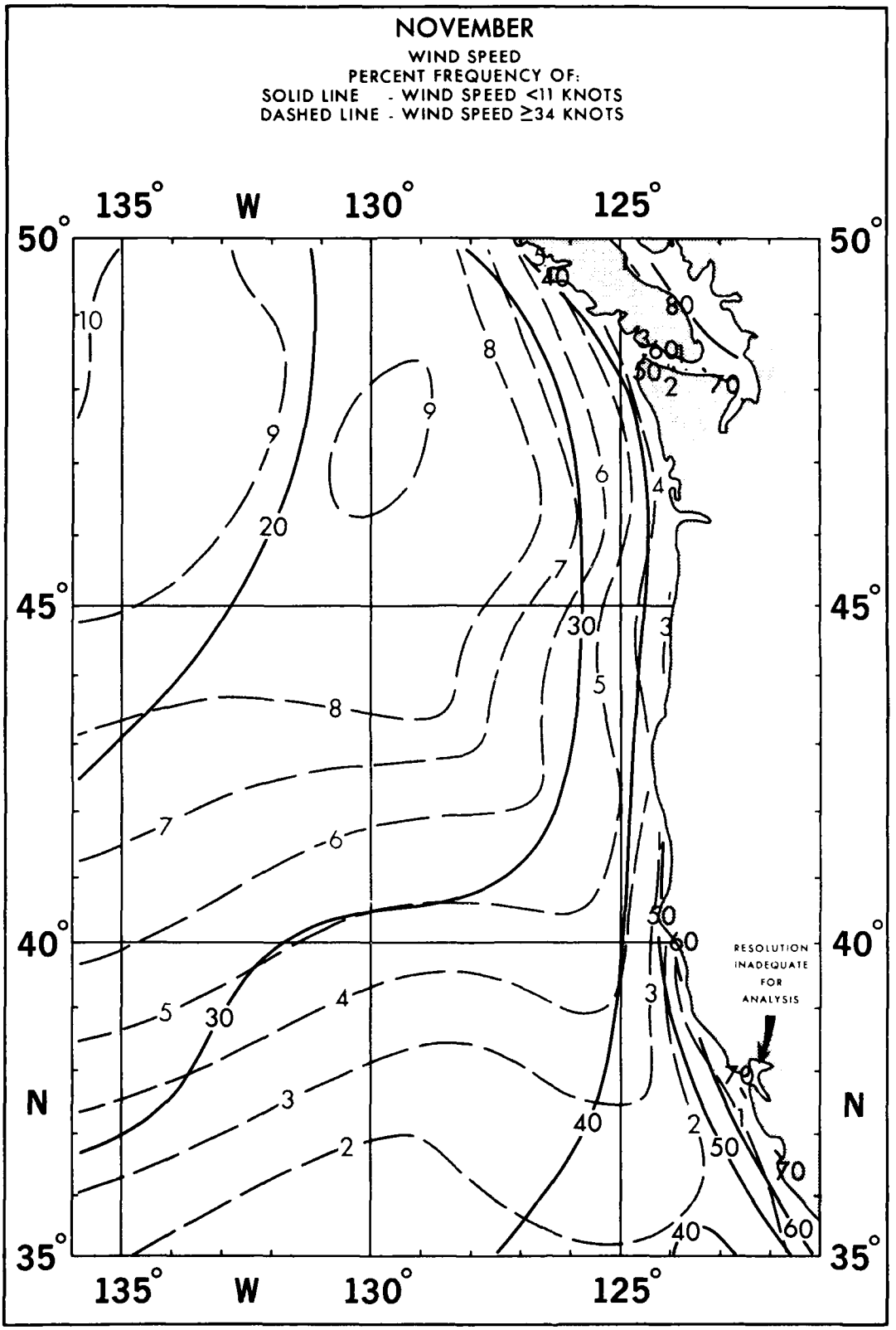

135° W 130° 125°
40°
N
35°
NOVEMBER
VISIBILITY
(NAUTICAL MILES)

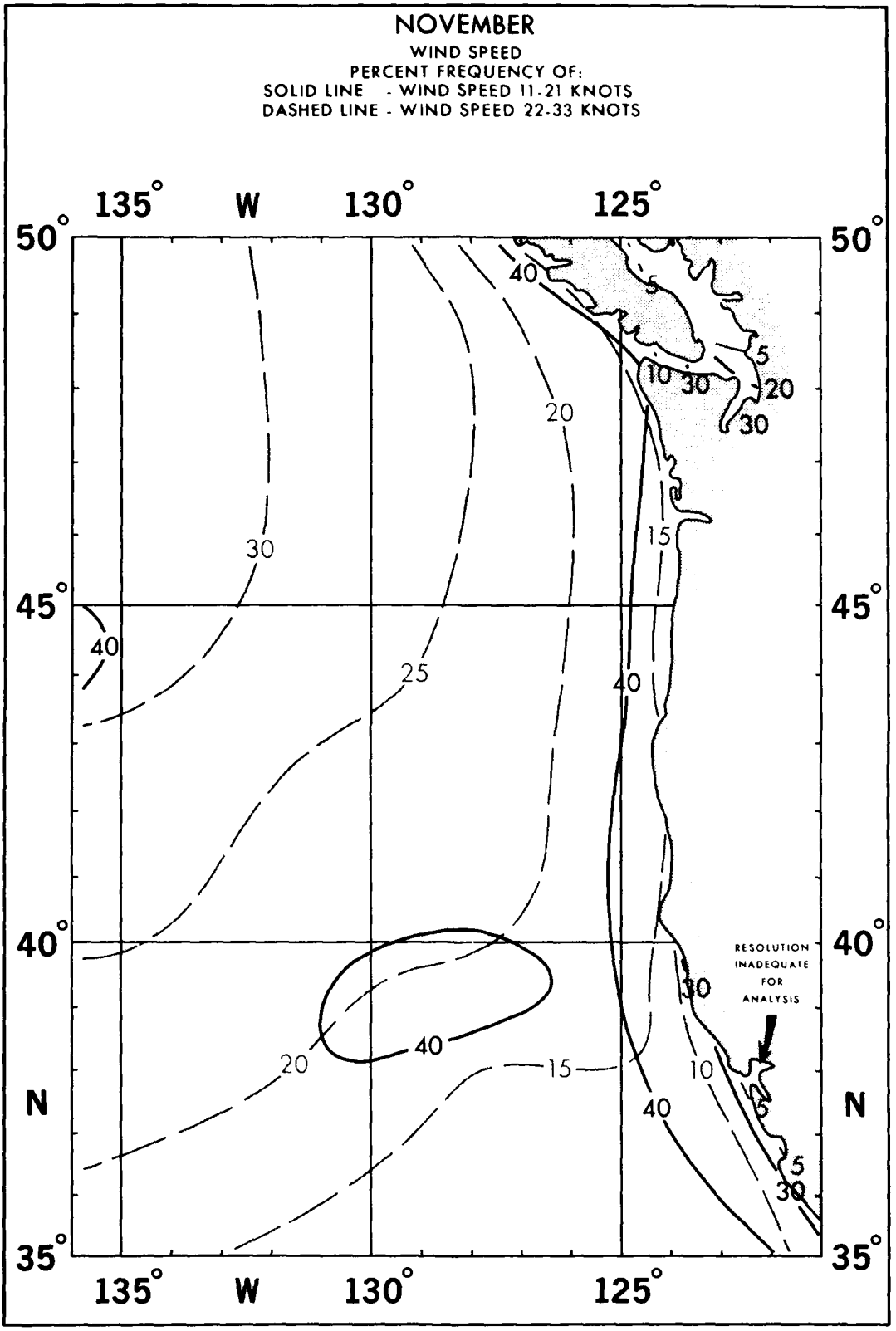

NOVEMBER
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
25
20
70
35
30
60
50
RESOLUTION INADEQUATE FOR ANALYSIS

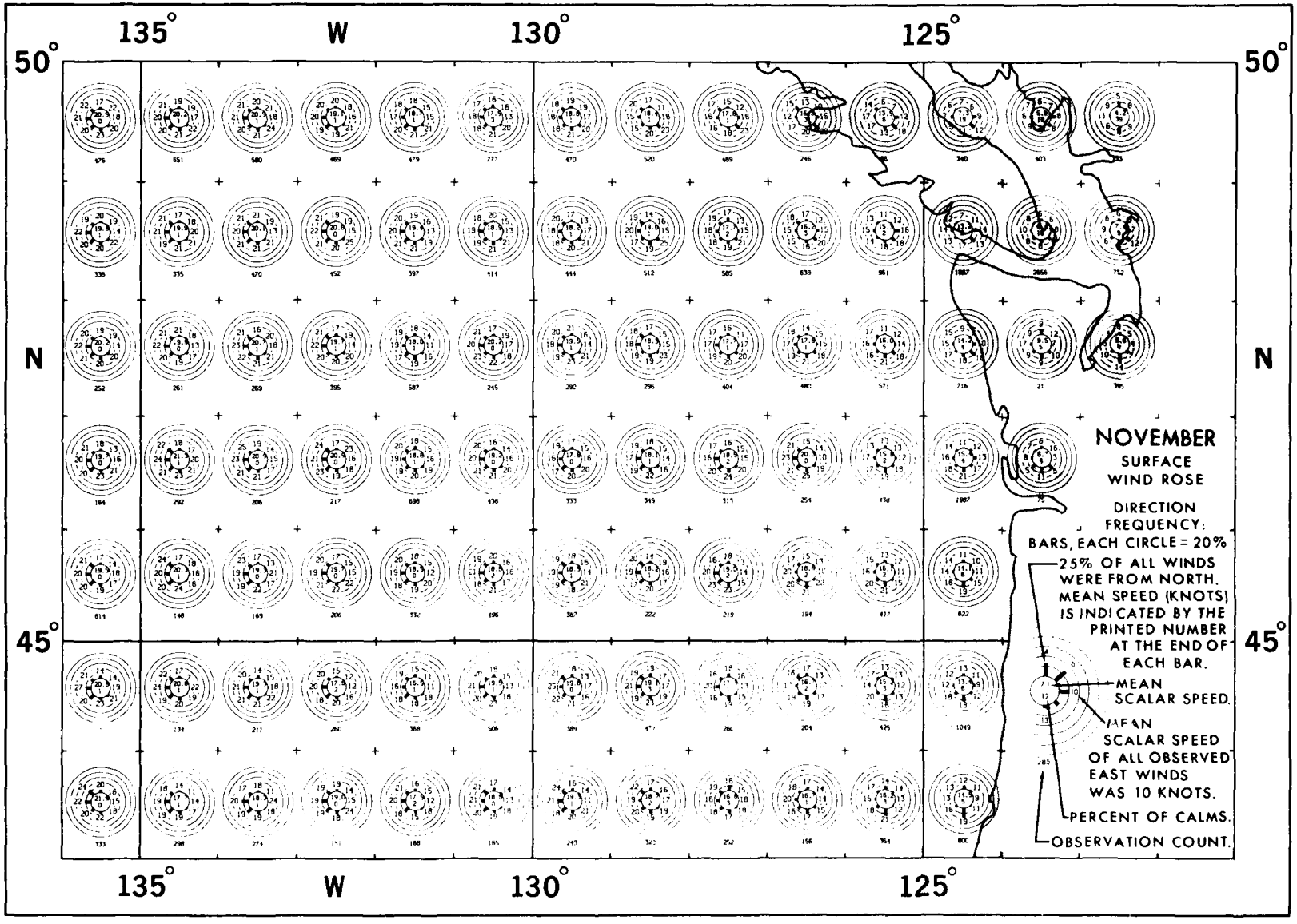

NOVEMBER
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
10
20
10
8
15
10
15
10
6
4
5

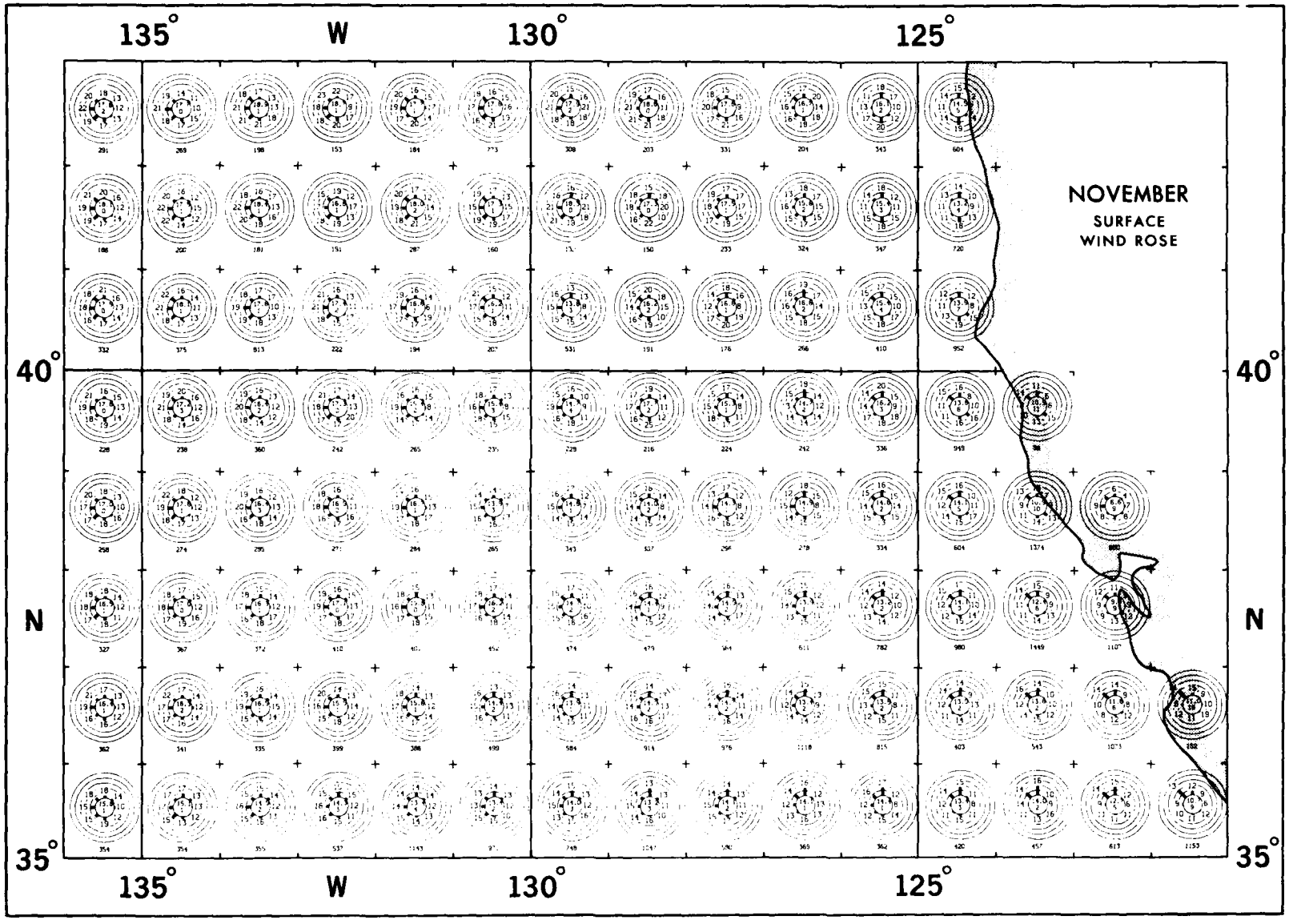

NOVEMBER
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS
10
15
20
25
30
35
40

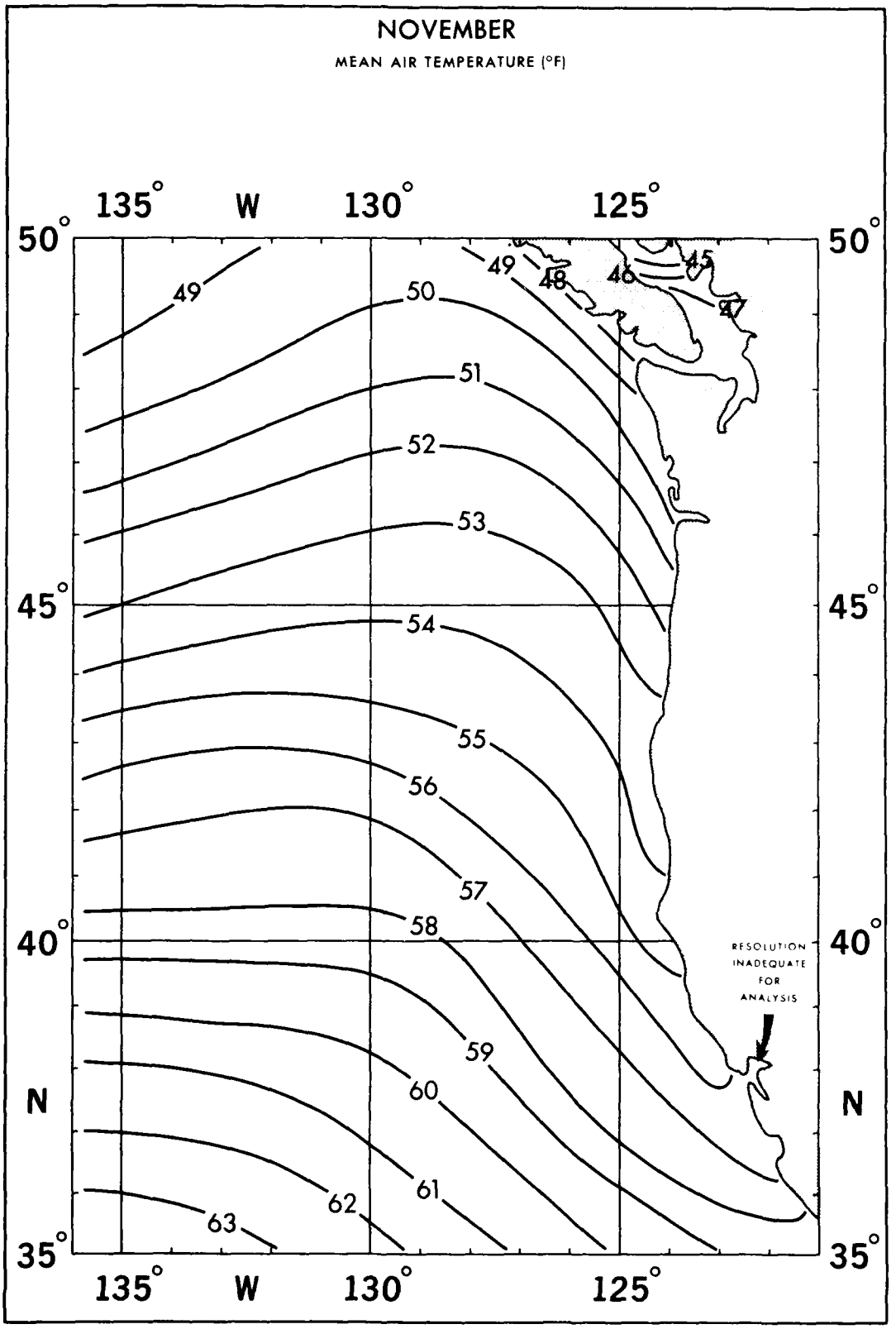

NOVEMBER
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
35°
N
20
19
19
18
17
16
15
14
13
12
11
10
9
14
13
12
10
9
RESOLUTION INADEQUATE FOR ANALYSIS

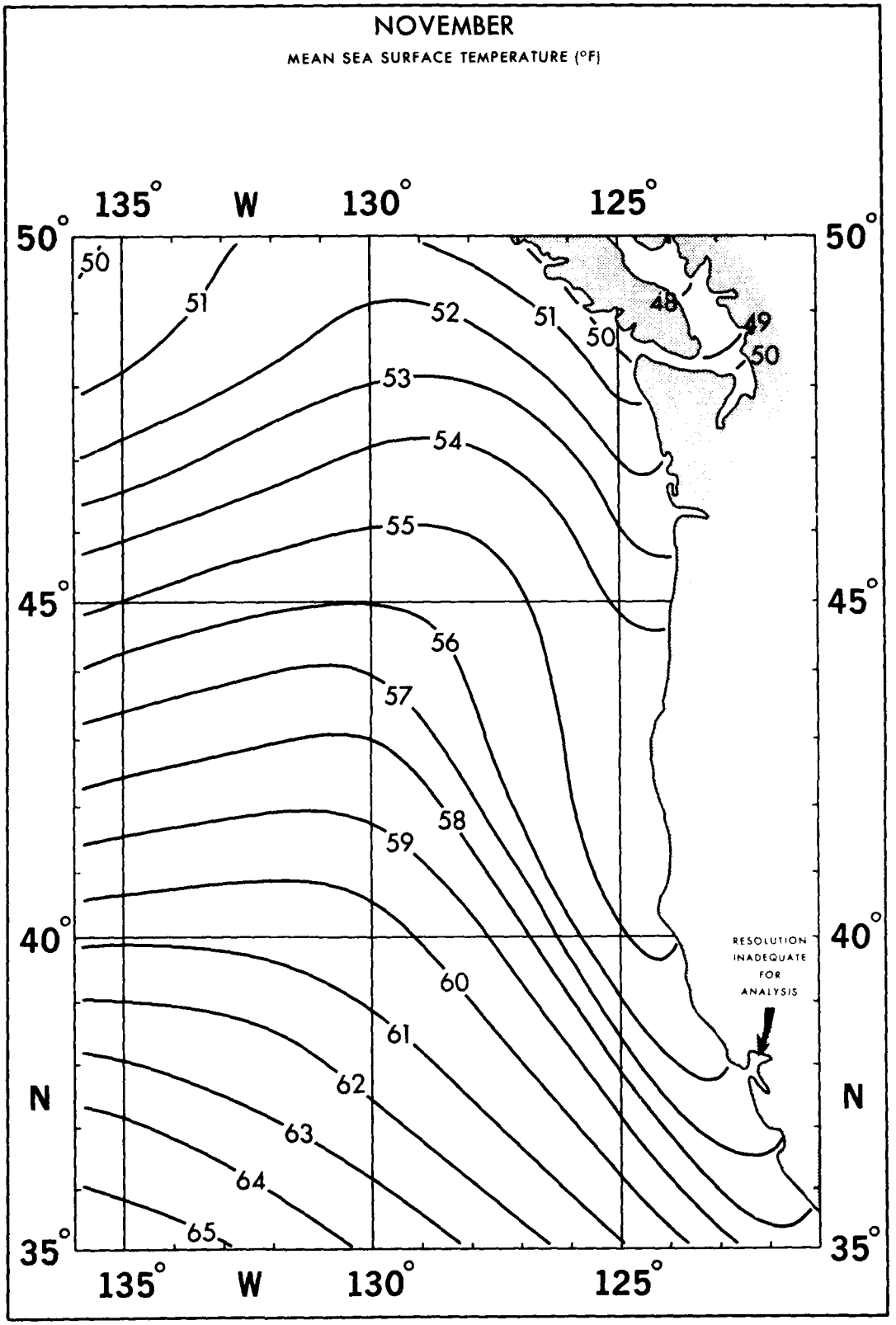

NOVEMBER
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

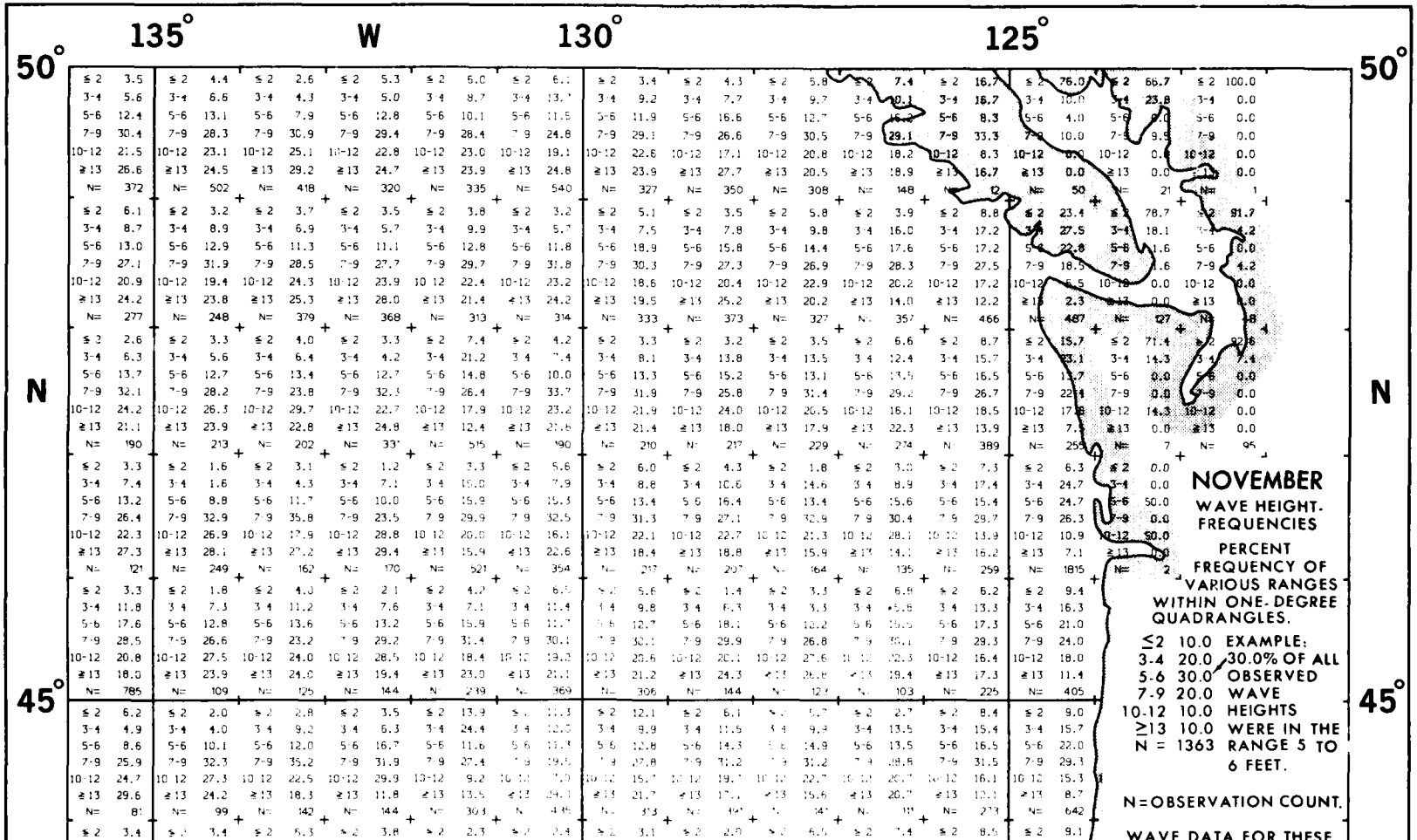

NOVEMBER
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

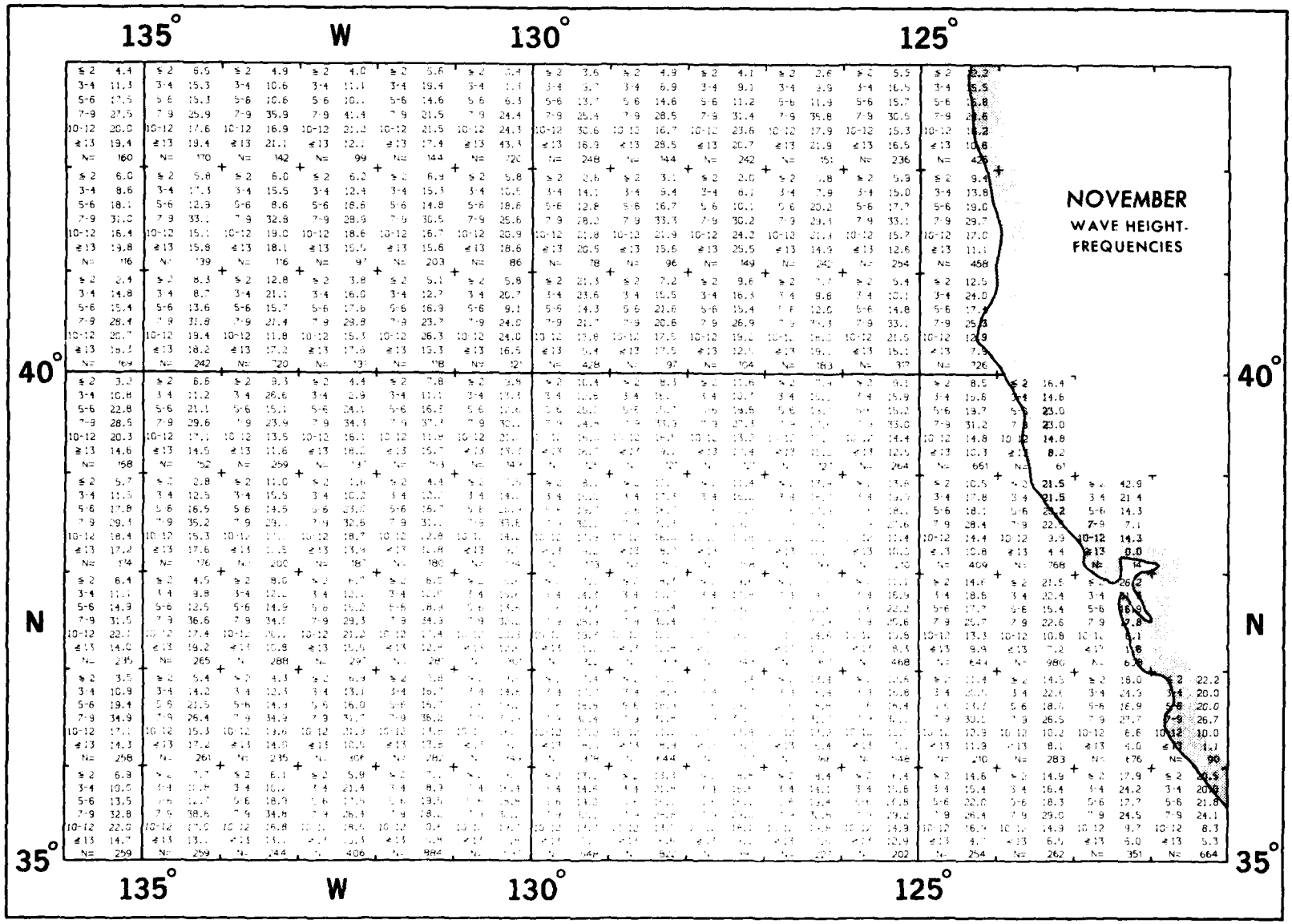

135° W 130° 125°
50°
N
45°
NOVEMBER
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

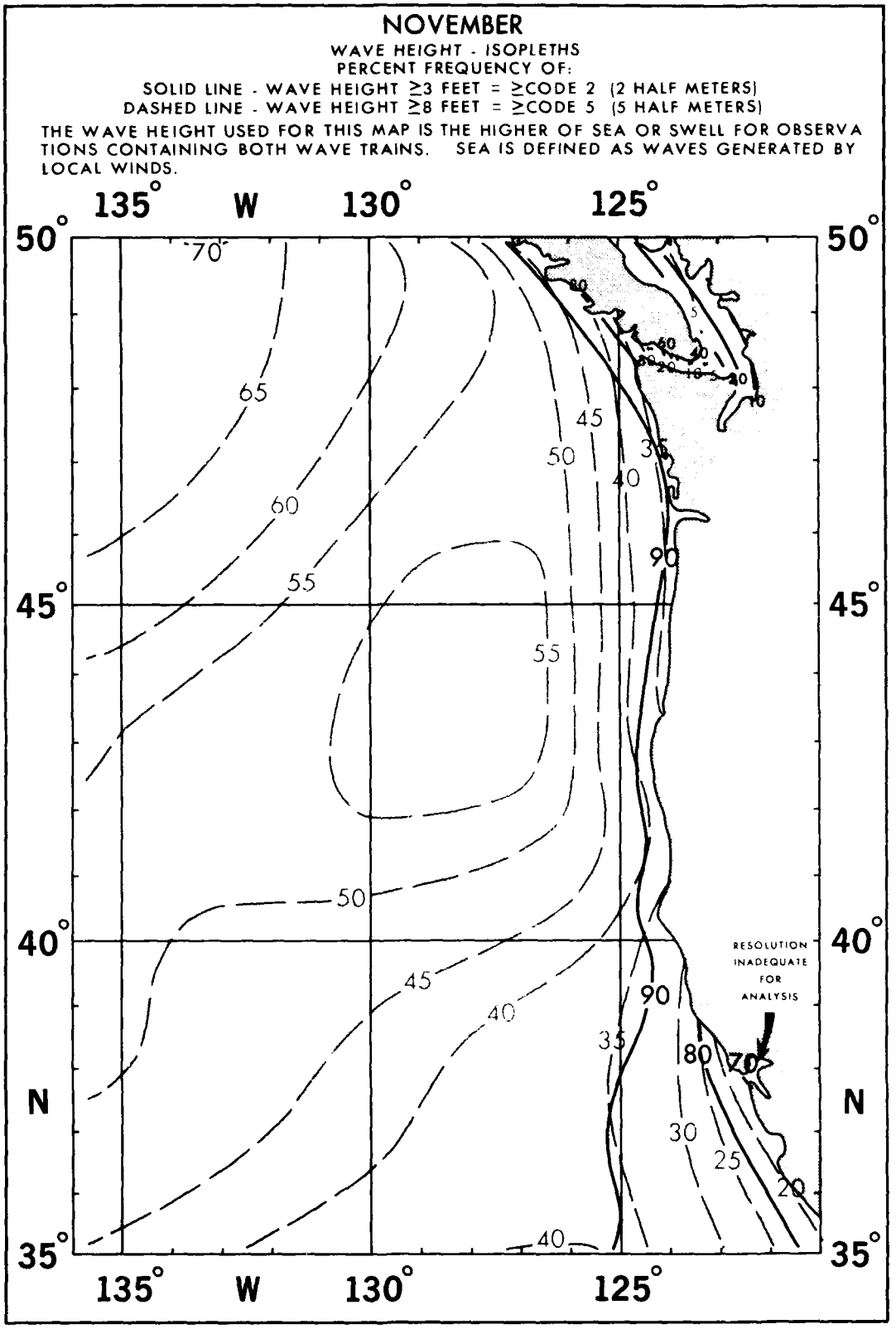

135° W 130° 125°
40° N 35°
NOVEMBER
SURFACE
WIND ROSE

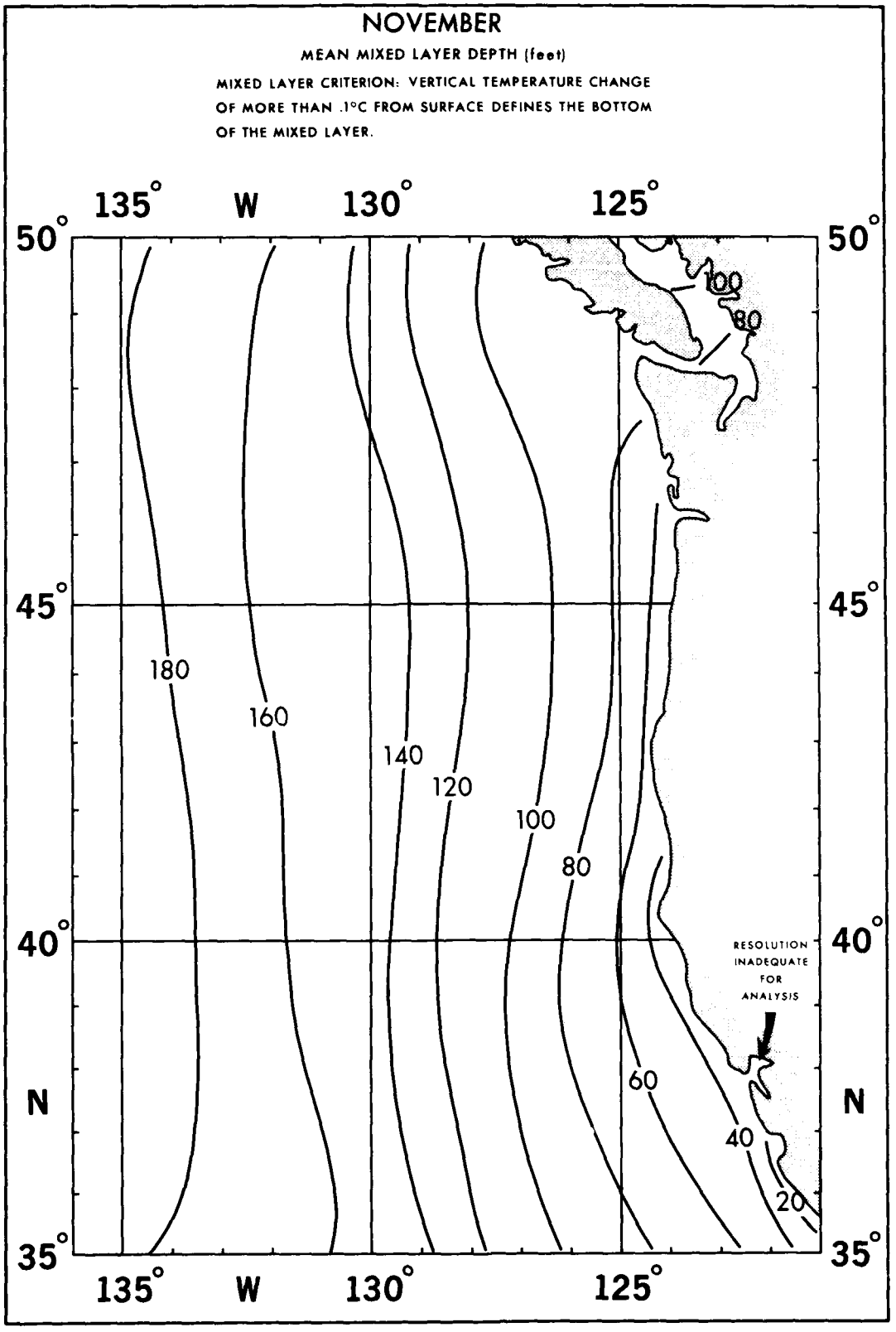

NOVEMBER
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
48
46
45
47
RESOLUTION INADEQUATE FOR ANALYSIS

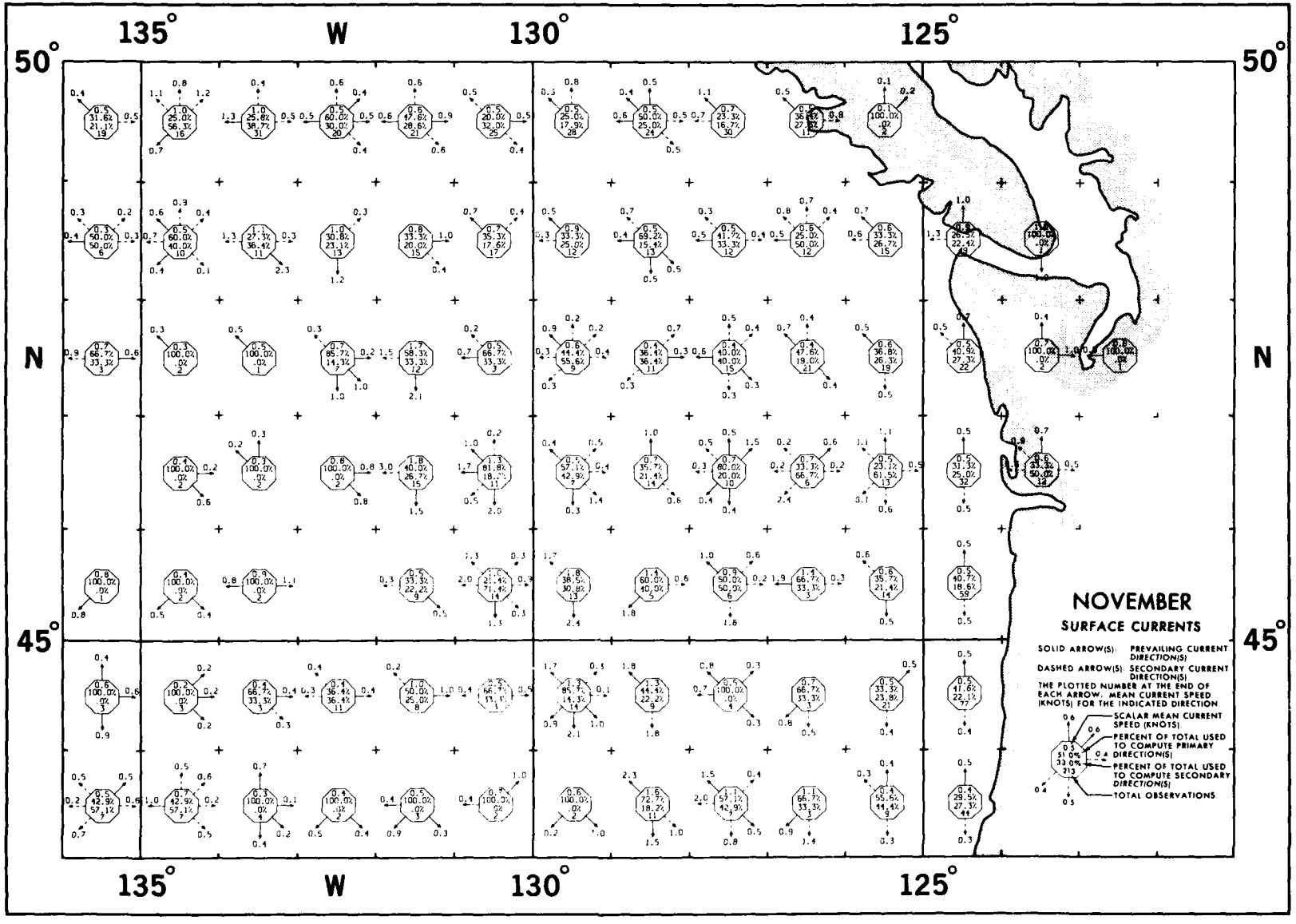

NOVEMBER
MEAN SEA SURFACE TEMPERATURE (°F)
135° W
130°
125°
50°
45°
40°
35° N
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
48
49
RESOLUTION INADEQUATE FOR ANALYSIS

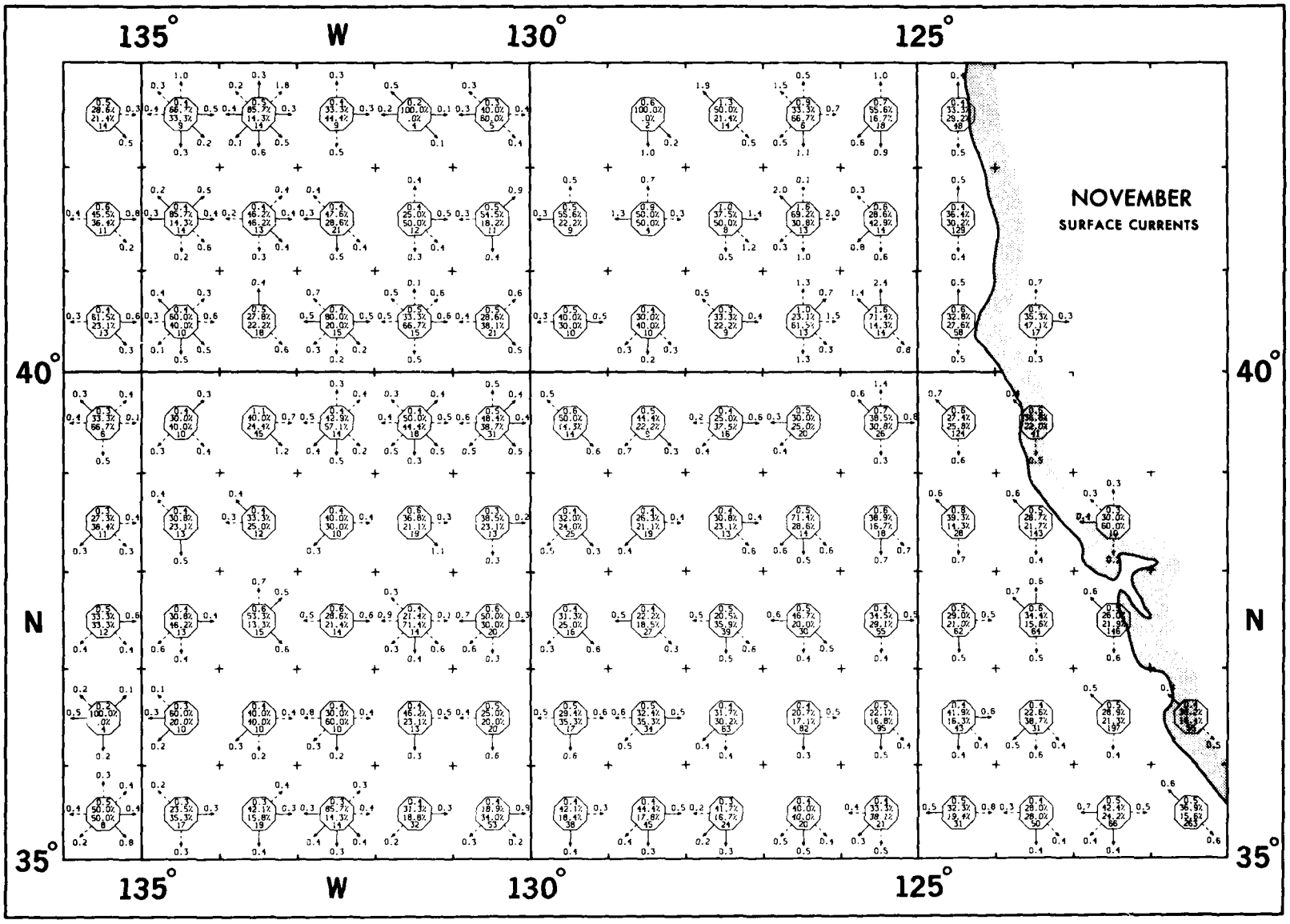

135° W 130° 125°
50°
45°
N
NOVEMBER
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.

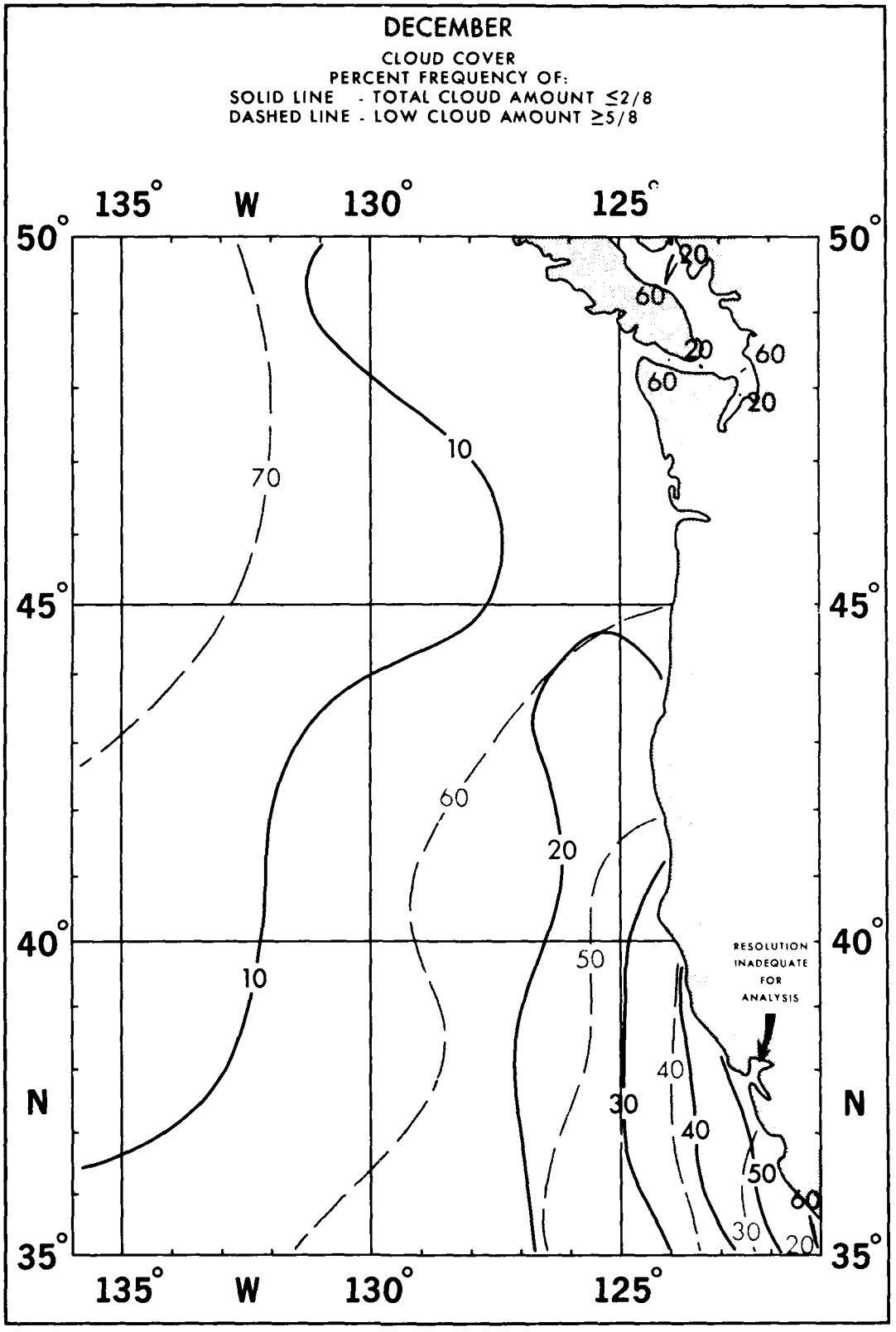

135° W 130° 125°
40°
N
35°
NOVEMBER
WAVE HEIGHT-
FREQUENCIES

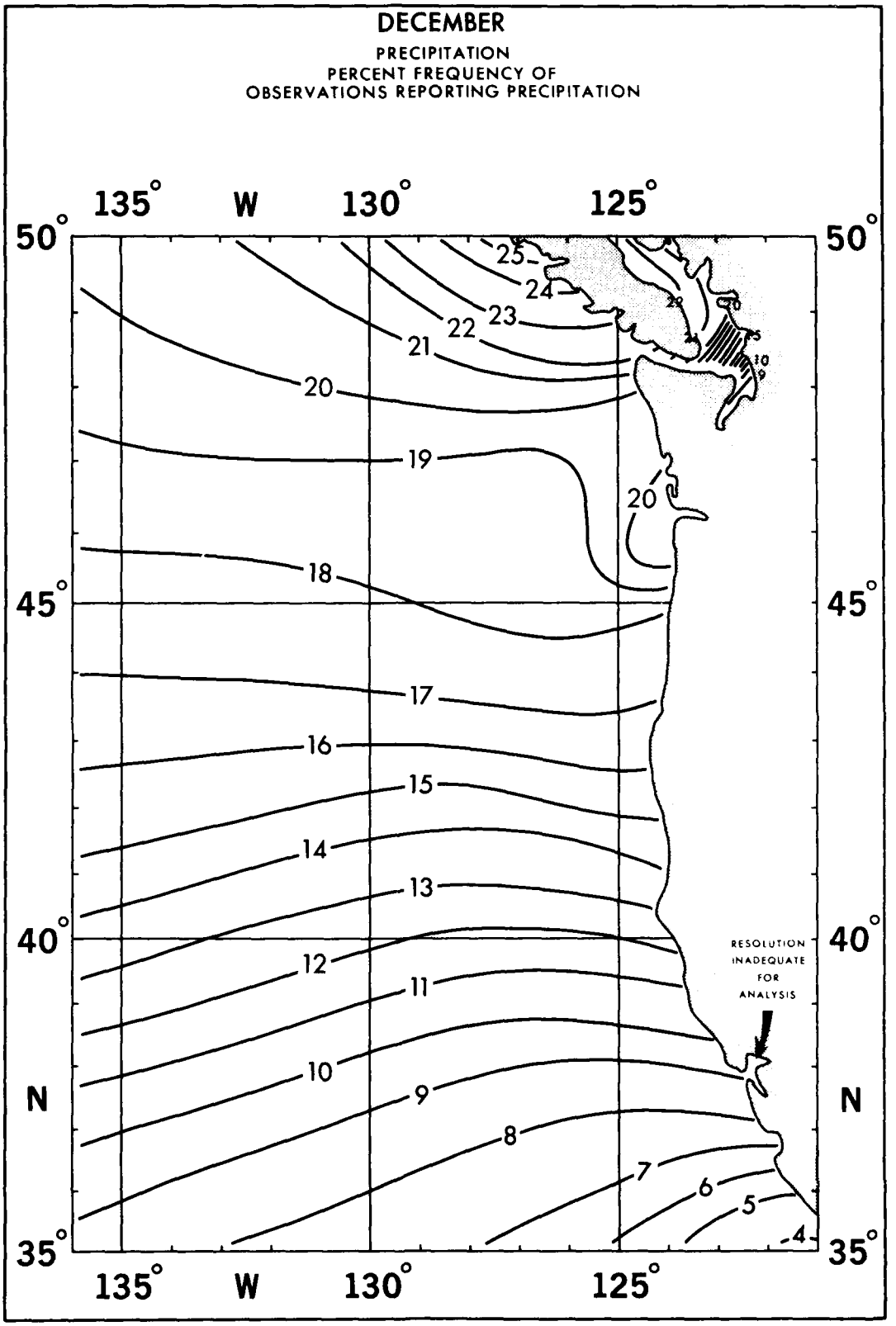

NOVEMBER
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
70
65
60
55
50
45
40
35
30
25
20
90
80
RESOLUTION INADEQUATE FOR ANALYSIS

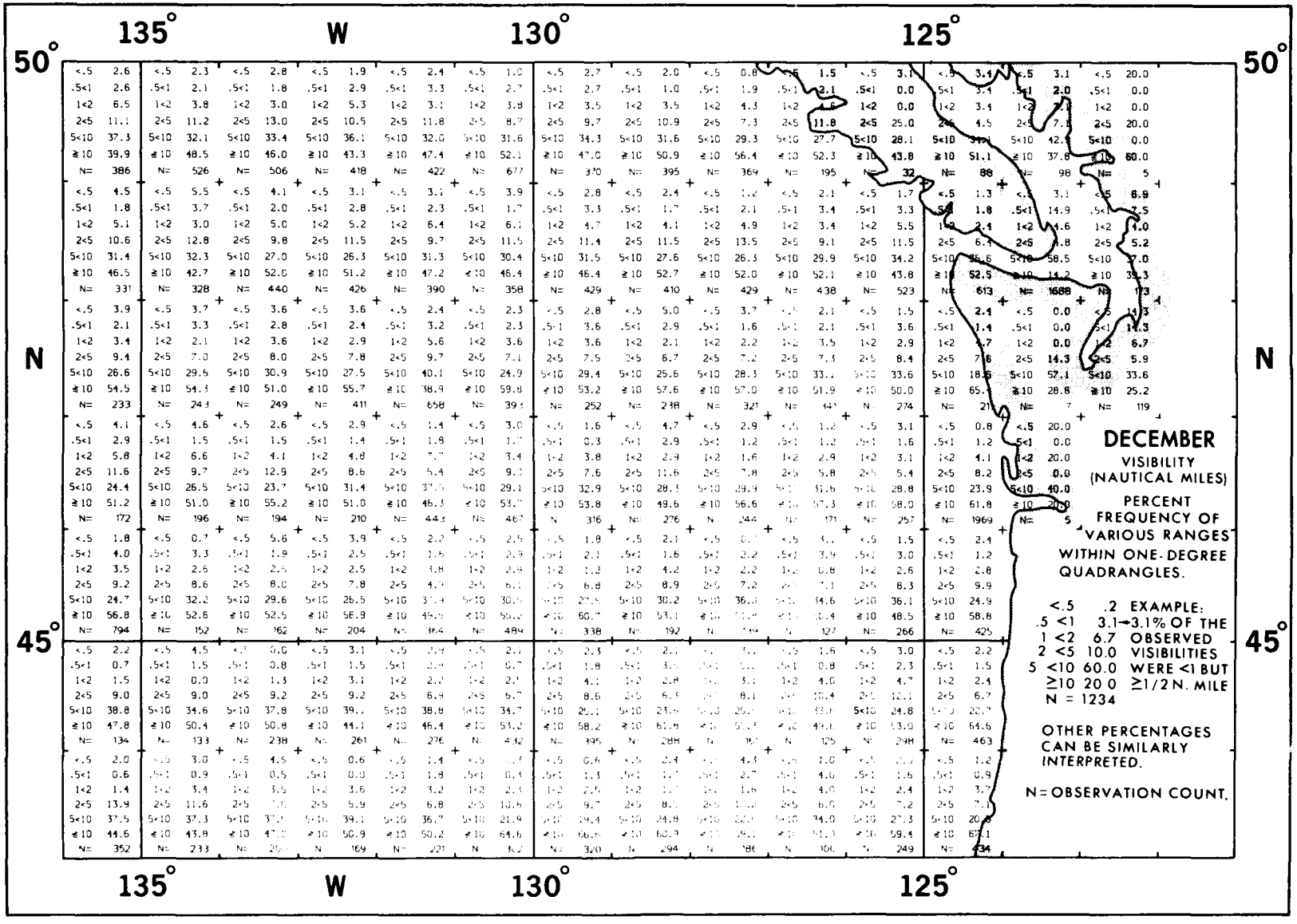

NOVEMBER
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W
130°
125°
50°
45°
40°
35°
N
180
160
140
120
100
80
60
40
20
RESOLUTION INADEQUATE FOR ANALYSIS

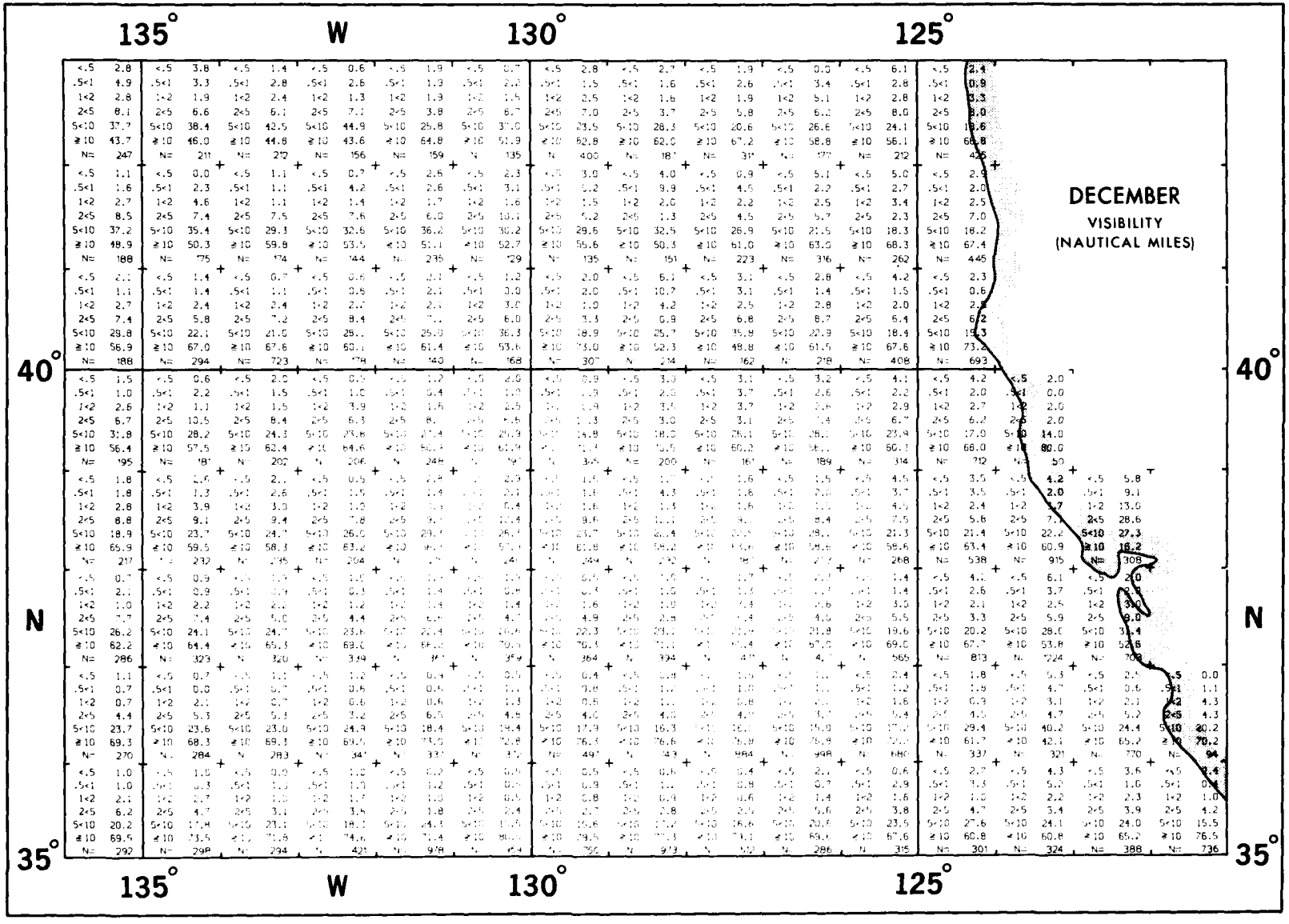

135° W 130° 125°
50°
45°
N
NOVEMBER
SURFACE CURRENTS
SOLID ARROW(S): PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S): SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW, MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS

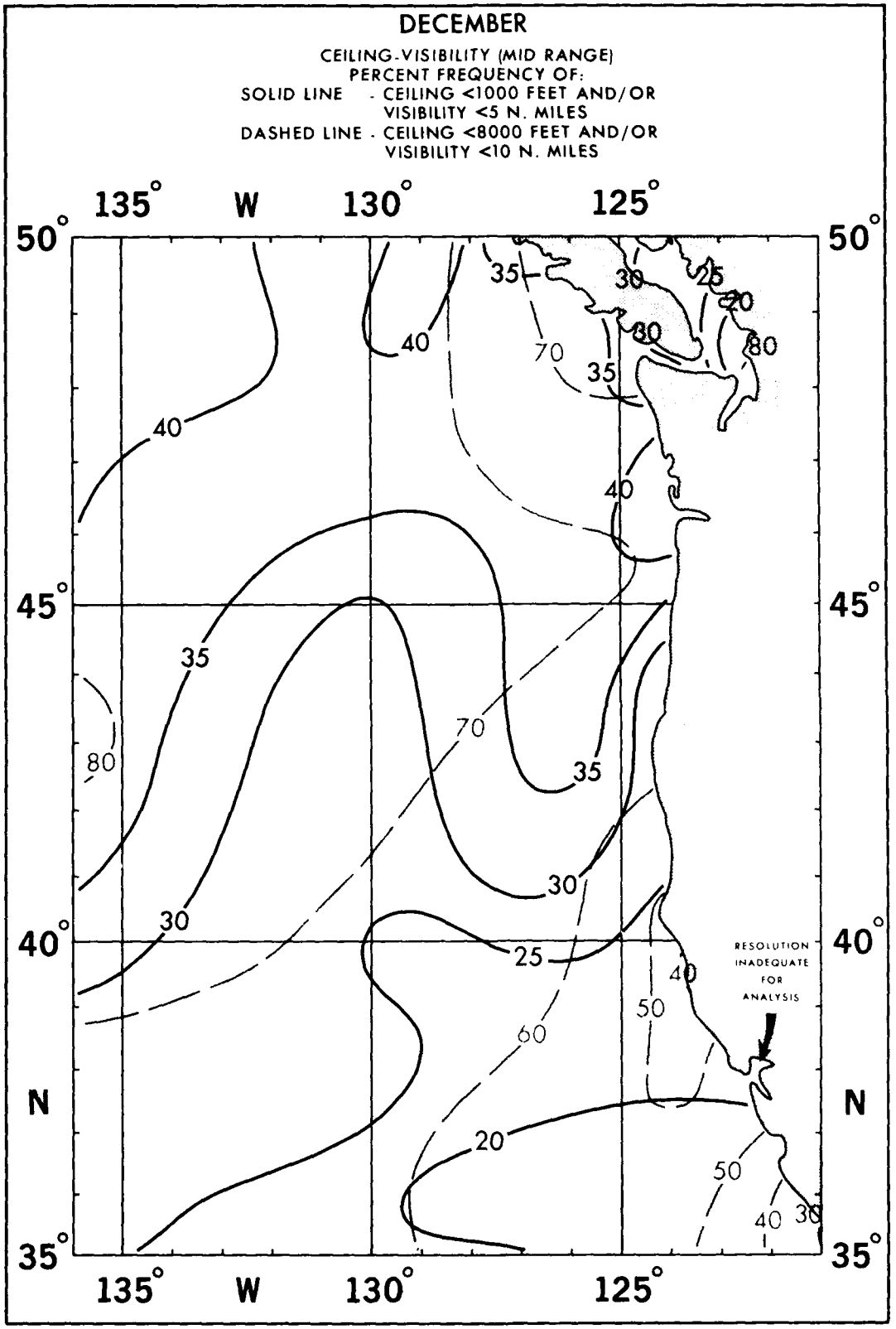

135° W 130° 125°
40°
N
35°
NOVEMBER
SURFACE CURRENTS

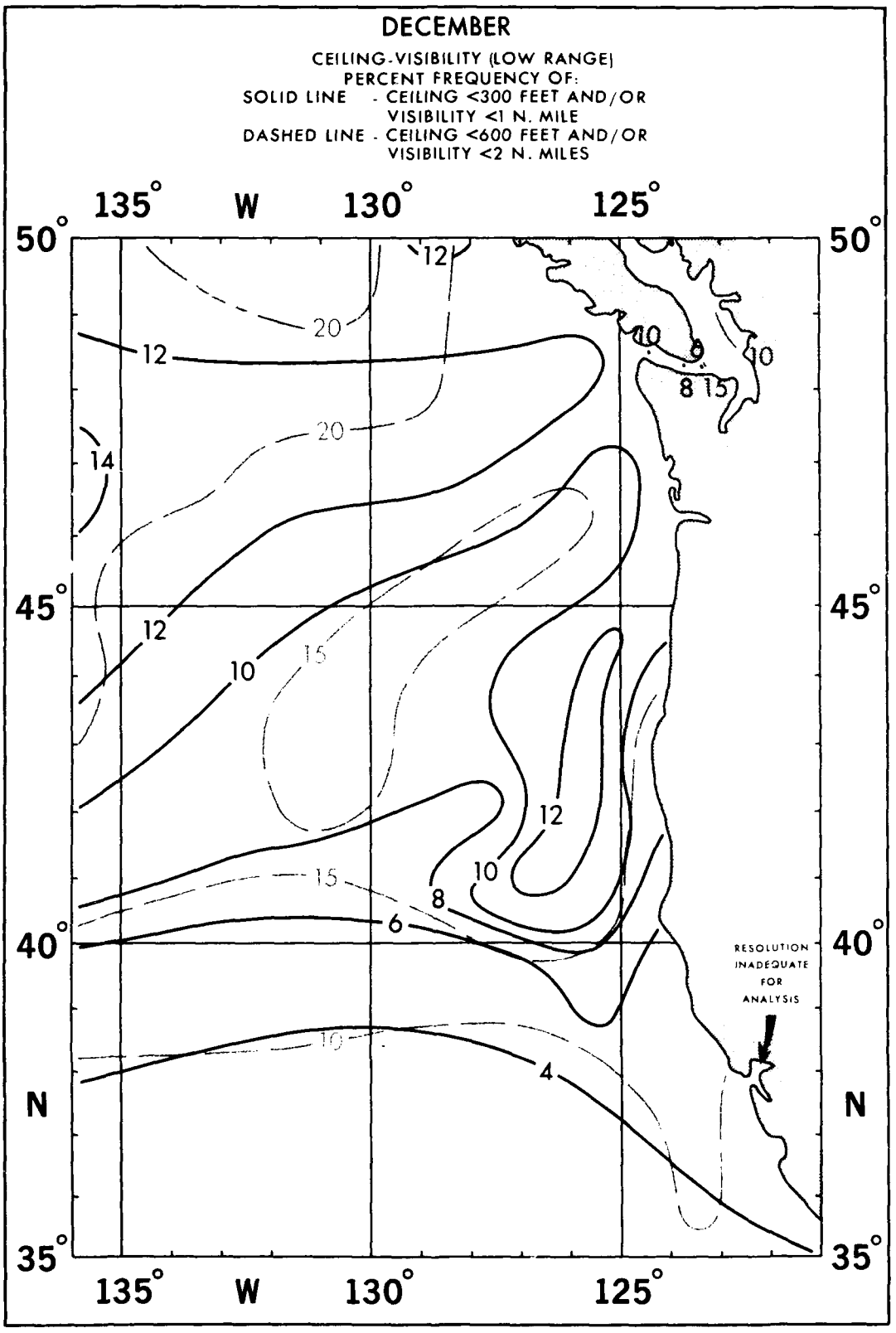

DECEMBER
CLOUD COVER
PERCENT FREQUENCY OF:
SOLID LINE - TOTAL CLOUD AMOUNT ≤2/8
DASHED LINE - LOW CLOUD AMOUNT ≥5/8
135° W 130° 125°
50°
45°
40°
35°
N
70
10
60
20
50
30
40
RESOLUTION INADEQUATE FOR ANALYSIS

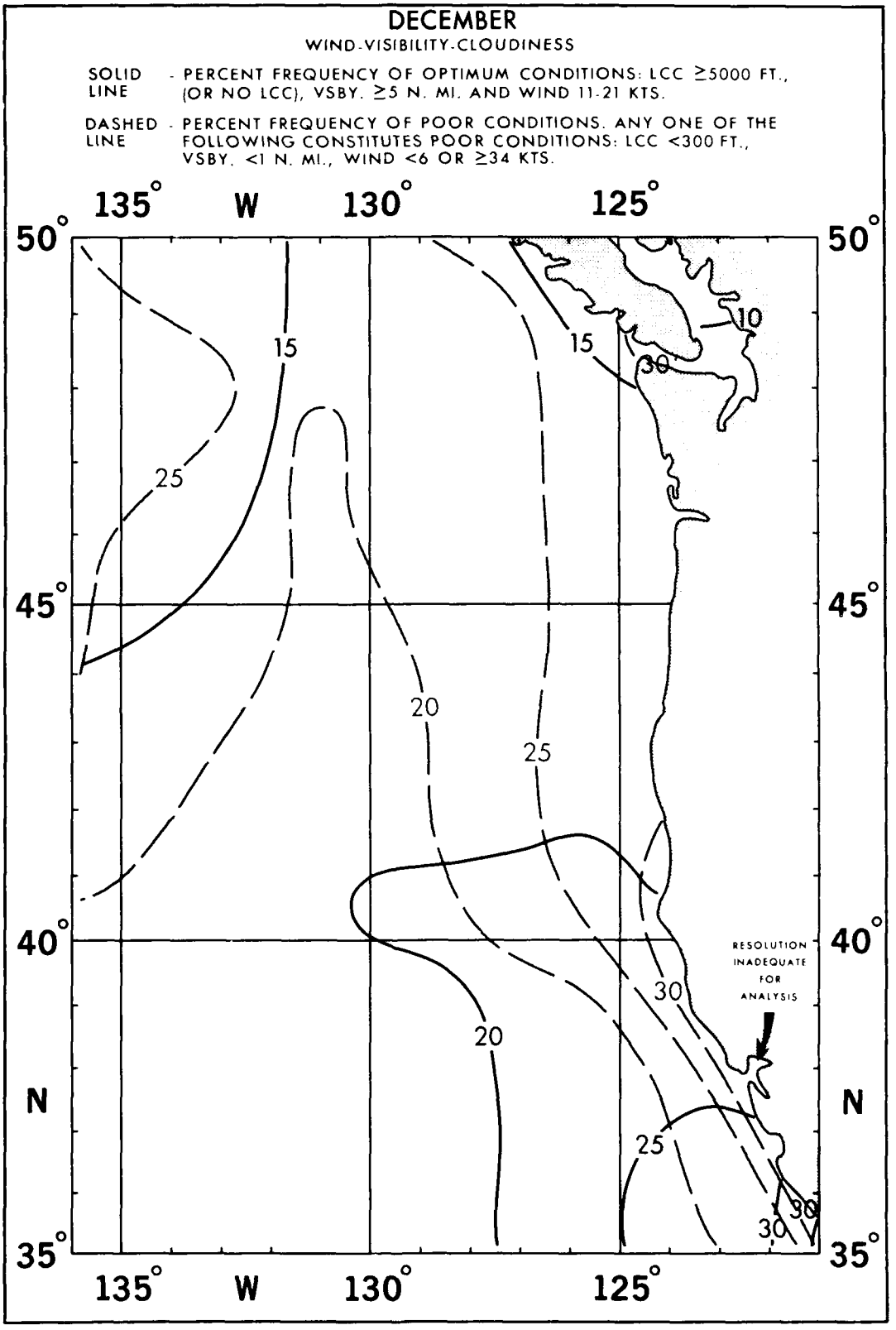

DECEMBER
PRECIPITATION
PERCENT FREQUENCY OF
OBSERVATIONS REPORTING PRECIPITATION
135° W 130° 125°
50°
45°
40°
35°
N
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
RESOLUTION INADEQUATE FOR ANALYSIS

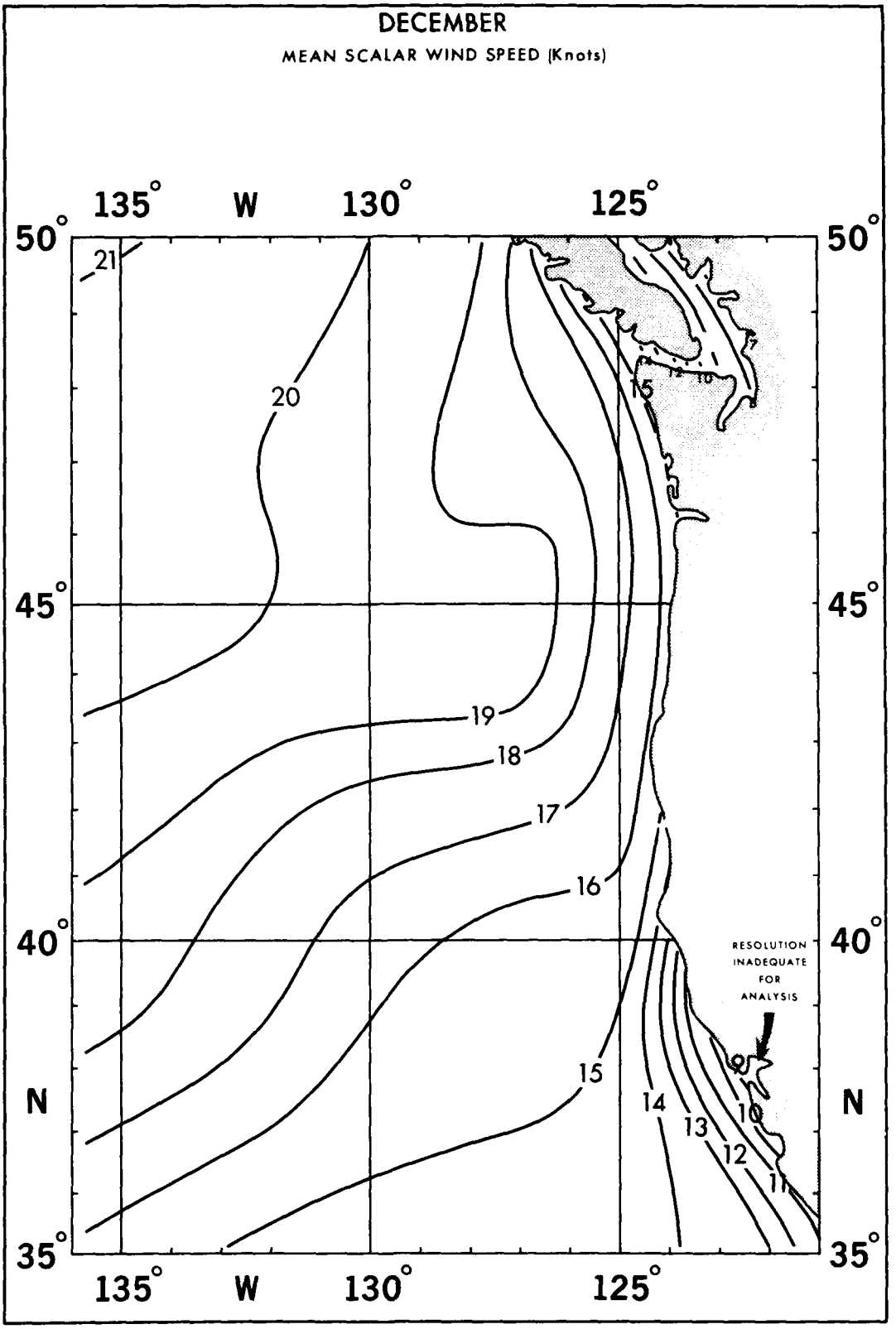

135° W 130° 125°
50°
45°
N
DECEMBER
VISIBILITY (NAUTICAL MILES)
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
<.5 .2 EXAMPLE:
.5 <1 3.1→3.1% OF THE
1 <2 6.7 OBSERVED
2 <5 10.0 VISIBILITIES
5 <10 60.0 WERE <1 BUT
≥10 20 0 ≥1/2 N. MILE
N = 1234
OTHER PERCENTAGES CAN BE SIMILARLY INTERPRETED.
N= OBSERVATION COUNT.

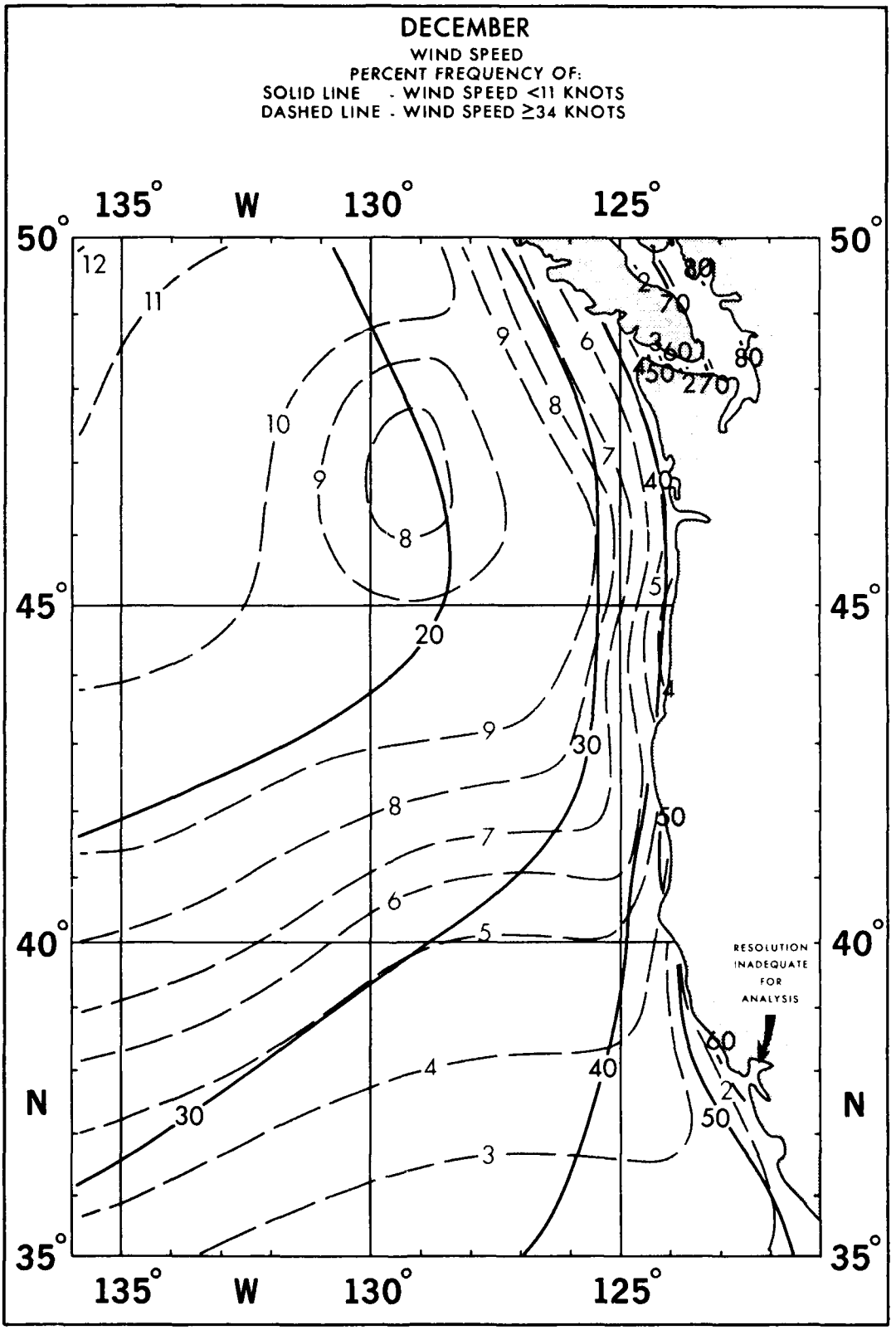

135° W 130° 125°
40°
35°
N
DECEMBER
VISIBILITY
(NAUTICAL MILES)

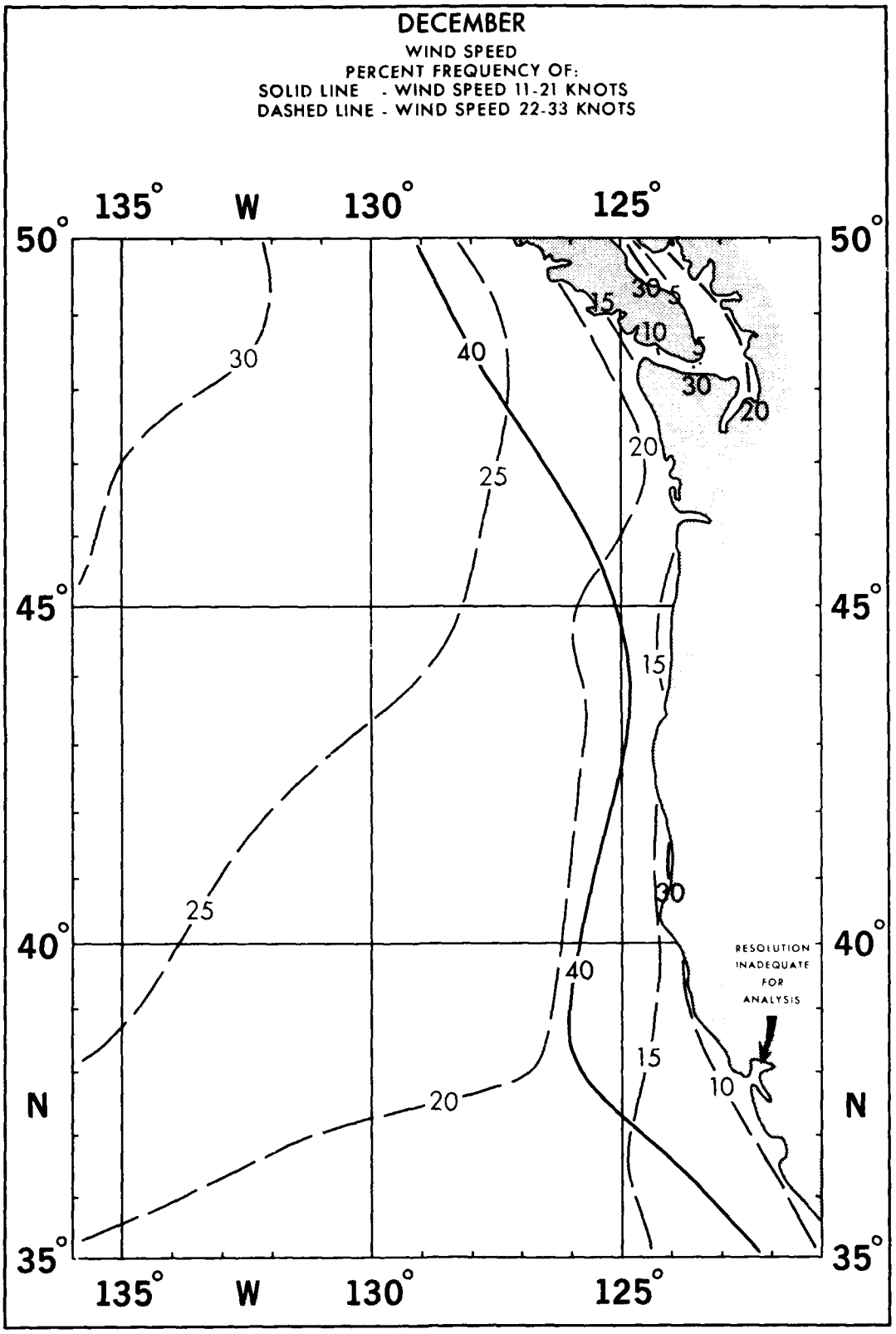

DECEMBER
CEILING-VISIBILITY (MID RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <1000 FEET AND/OR VISIBILITY <5 N. MILES
DASHED LINE - CEILING <8000 FEET AND/OR VISIBILITY <10 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

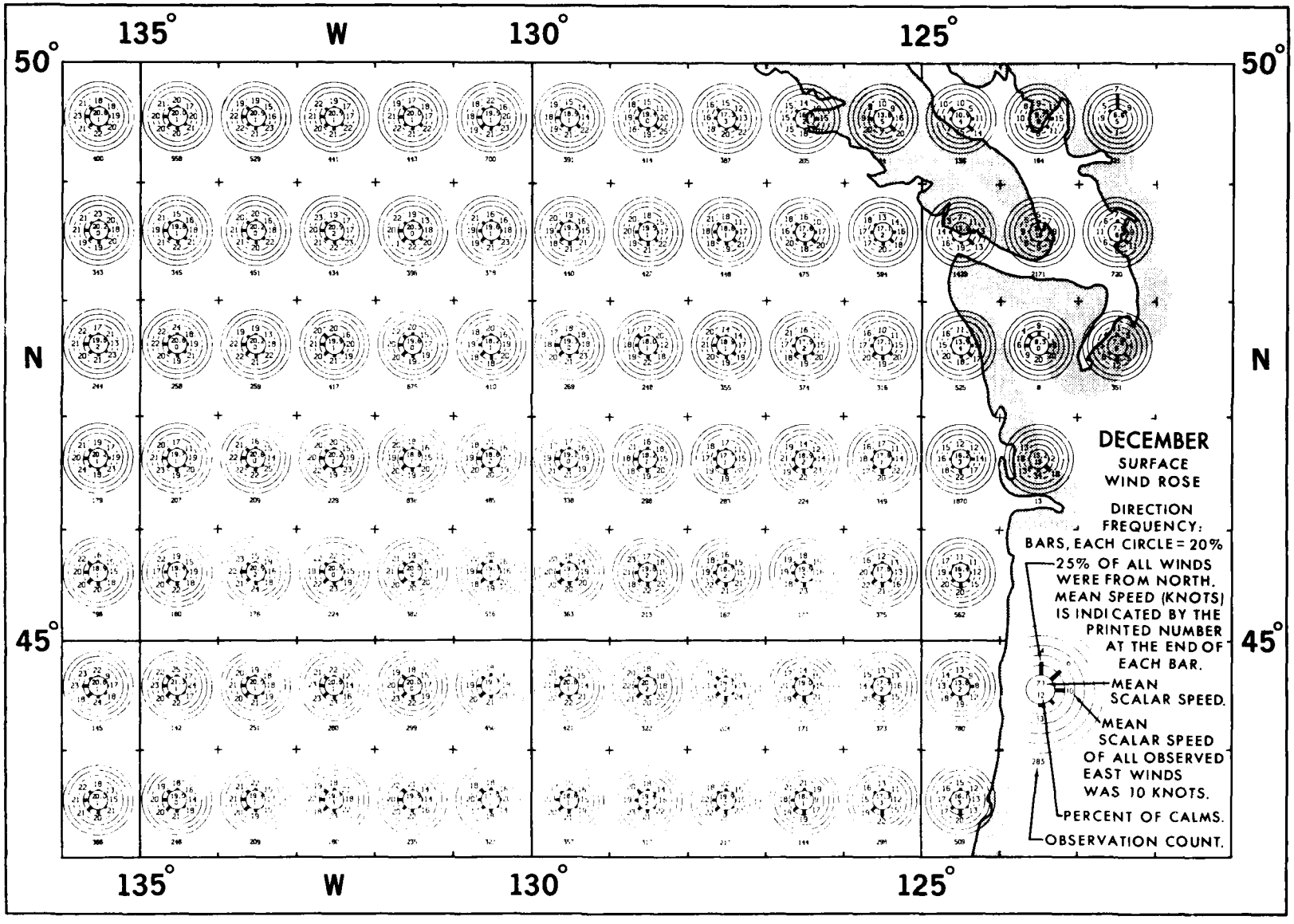

DECEMBER
CEILING-VISIBILITY (LOW RANGE)
PERCENT FREQUENCY OF:
SOLID LINE - CEILING <300 FEET AND/OR VISIBILITY <1 N. MILE
DASHED LINE - CEILING <600 FEET AND/OR VISIBILITY <2 N. MILES
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

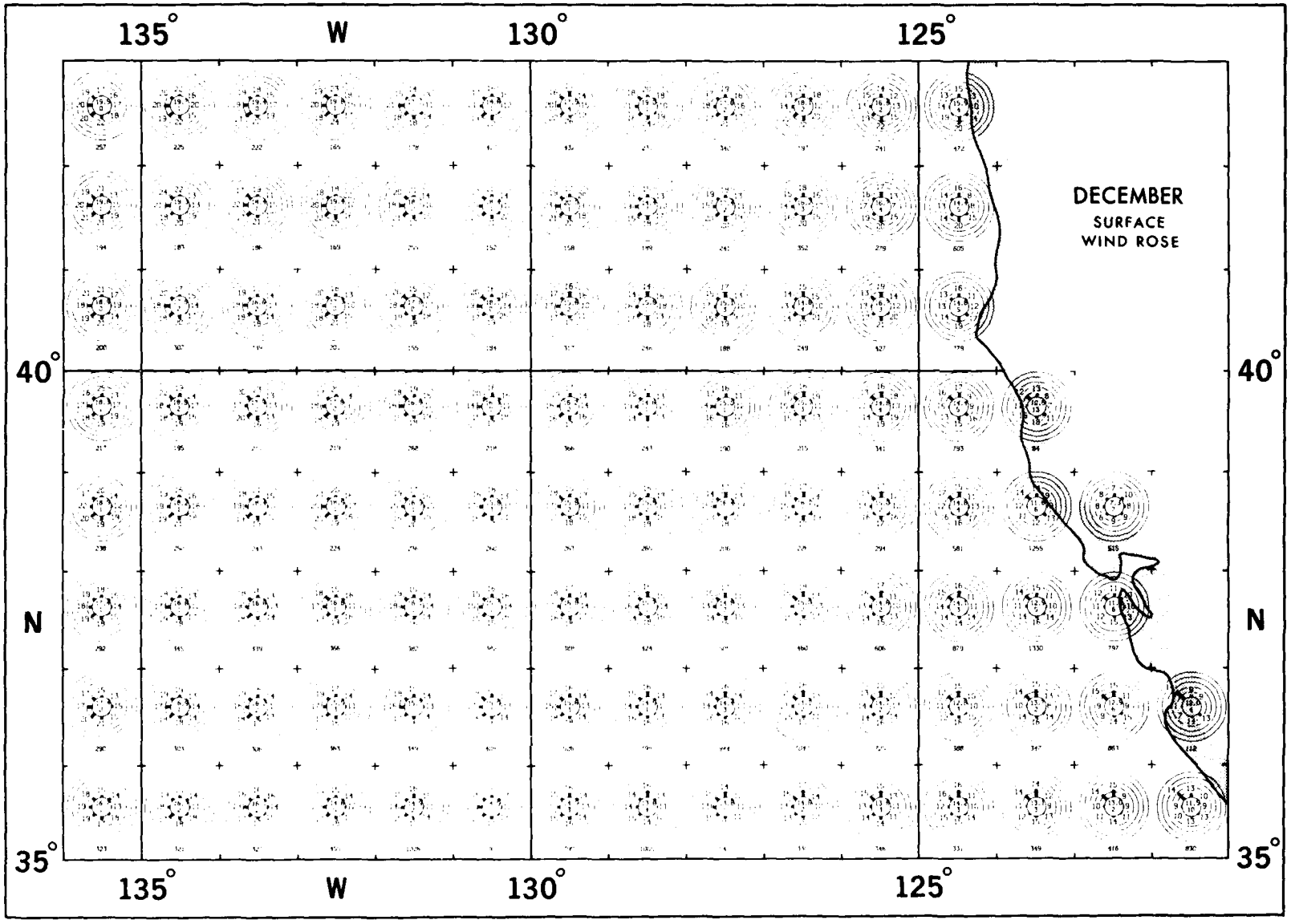

DECEMBER
WIND-VISIBILITY-CLOUDINESS
SOLID LINE - PERCENT FREQUENCY OF OPTIMUM CONDITIONS: LCC ≥5000 FT., (OR NO LCC), VSBY. ≥5 N. MI. AND WIND 11-21 KTS.
DASHED LINE - PERCENT FREQUENCY OF POOR CONDITIONS. ANY ONE OF THE FOLLOWING CONSTITUTES POOR CONDITIONS: LCC <300 FT., VSBY. <1 N. MI., WIND <6 OR ≥34 KTS.
135° W 130° 125°
50°
45°
40°
35°
N
10
15
20
25
30
RESOLUTION INADEQUATE FOR ANALYSIS

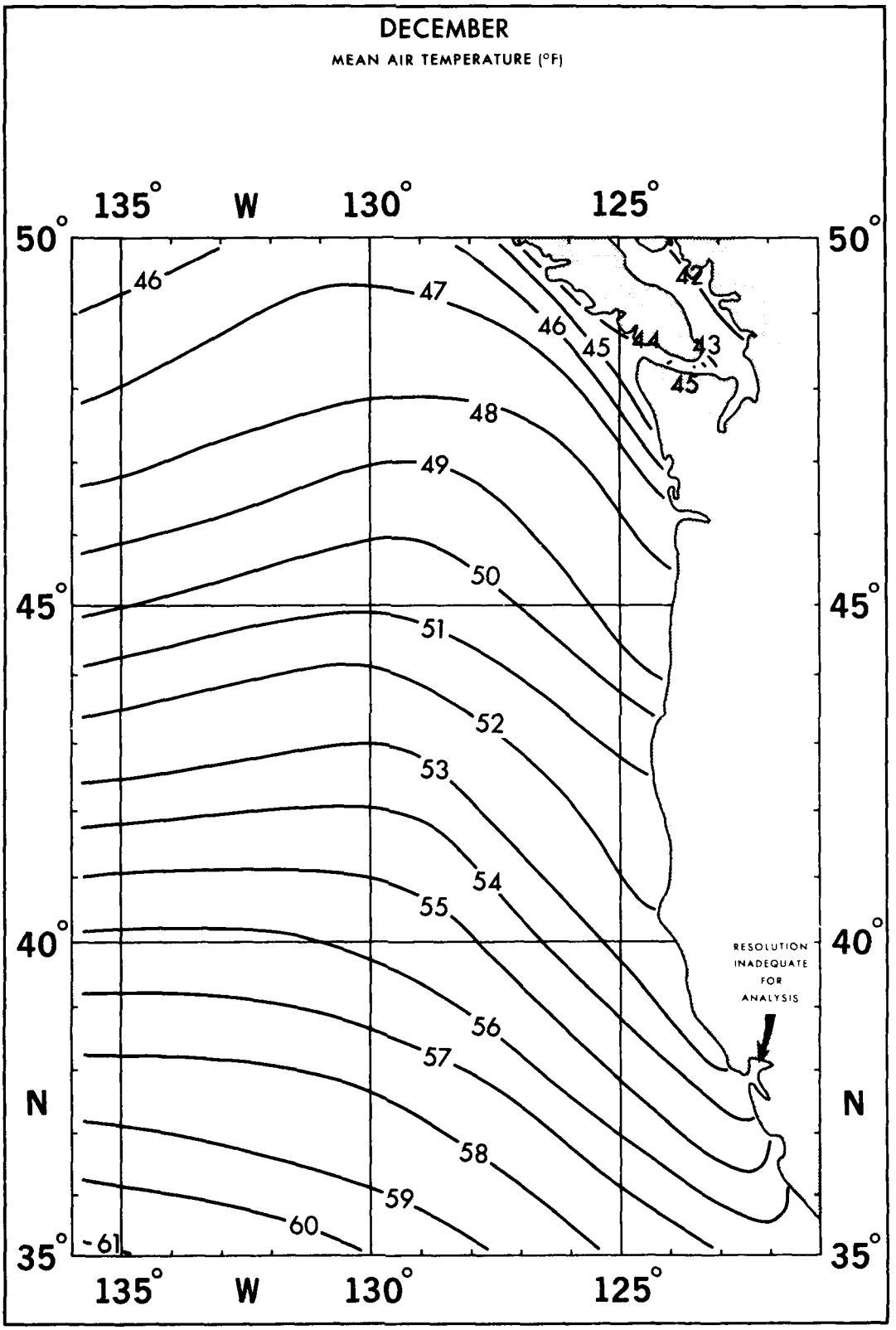

DECEMBER
MEAN SCALAR WIND SPEED (Knots)
135° W 130° 125°
50°
45°
40°
35°
N
21
20
19
18
17
16
15
14
13
12
11
10
9
RESOLUTION INADEQUATE FOR ANALYSIS

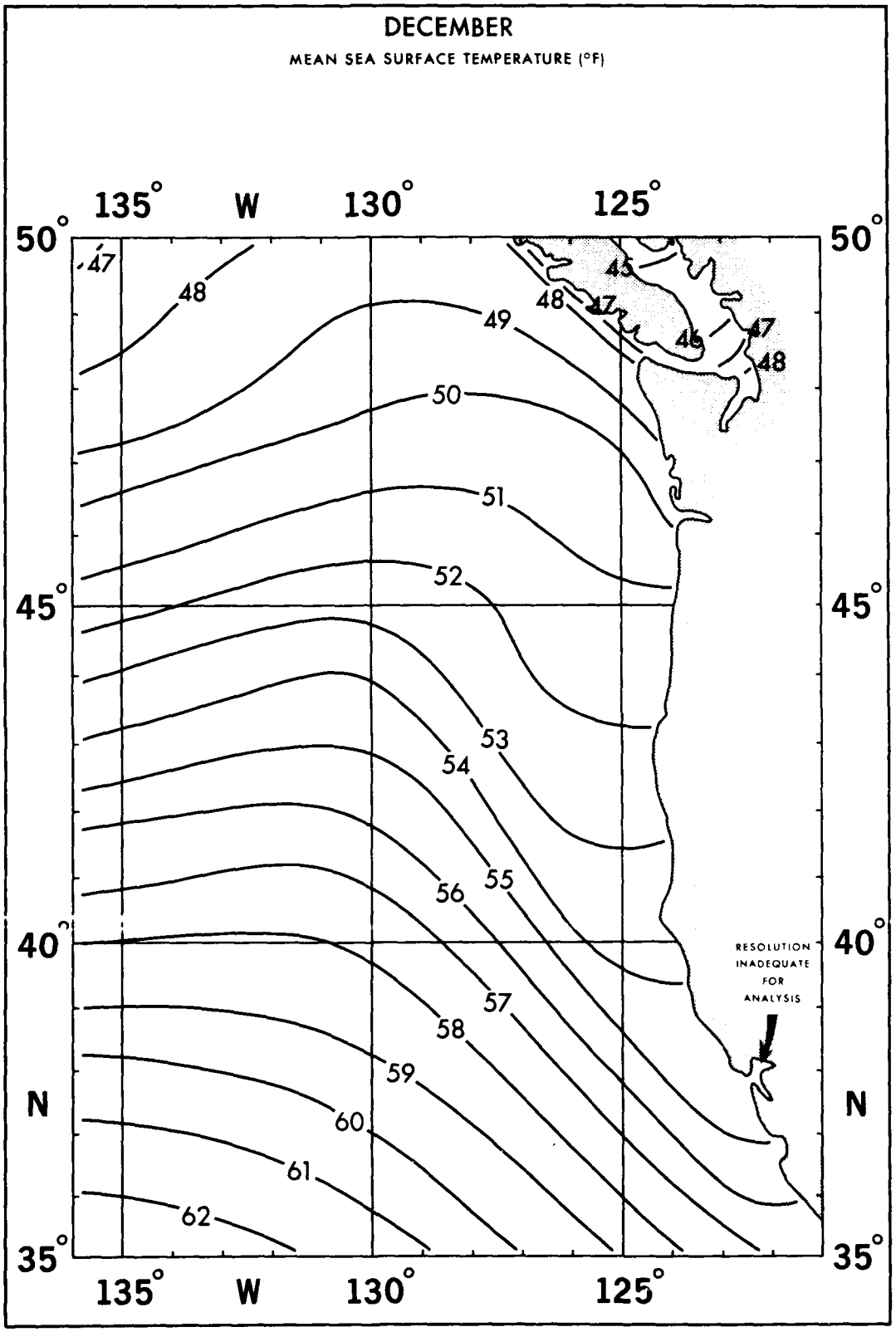

DECEMBER
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED <11 KNOTS
DASHED LINE - WIND SPEED ≥34 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
RESOLUTION INADEQUATE FOR ANALYSIS

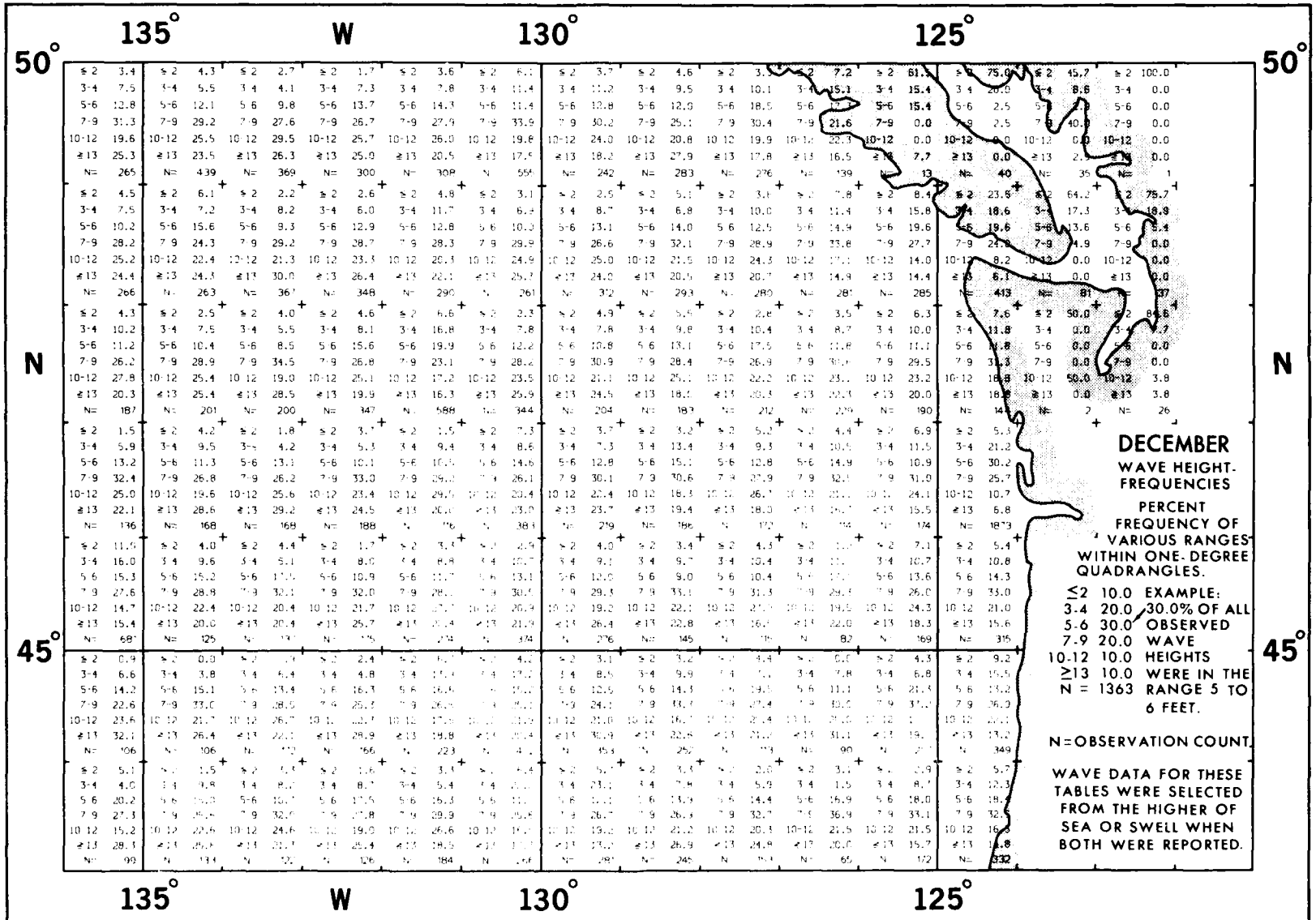

DECEMBER
WIND SPEED
PERCENT FREQUENCY OF:
SOLID LINE - WIND SPEED 11-21 KNOTS
DASHED LINE - WIND SPEED 22-33 KNOTS
135° W 130° 125°
50°
45°
40°
35°
N
30
40
25
20
15
10
RESOLUTION INADEQUATE FOR ANALYSIS

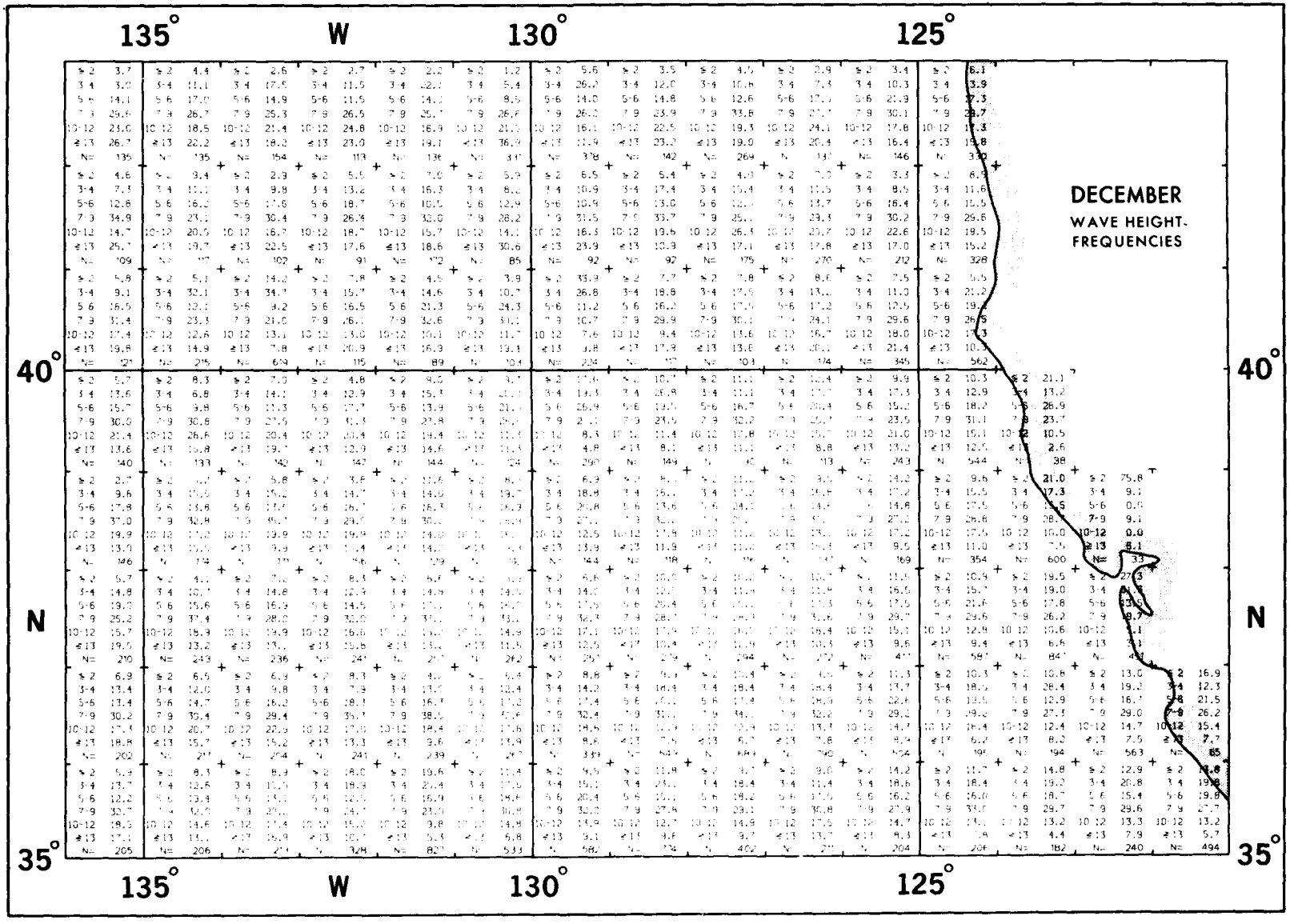

135° W 130° 125°
50°
45°
N
DECEMBER
SURFACE
WIND ROSE
DIRECTION
FREQUENCY:
BARS, EACH CIRCLE = 20%
25% OF ALL WINDS WERE FROM NORTH.
MEAN SPEED (KNOTS) IS INDICATED BY THE PRINTED NUMBER AT THE END OF EACH BAR.
MEAN SCALAR SPEED.
MEAN SCALAR SPEED OF ALL OBSERVED EAST WINDS WAS 10 KNOTS.
PERCENT OF CALMS.
OBSERVATION COUNT.

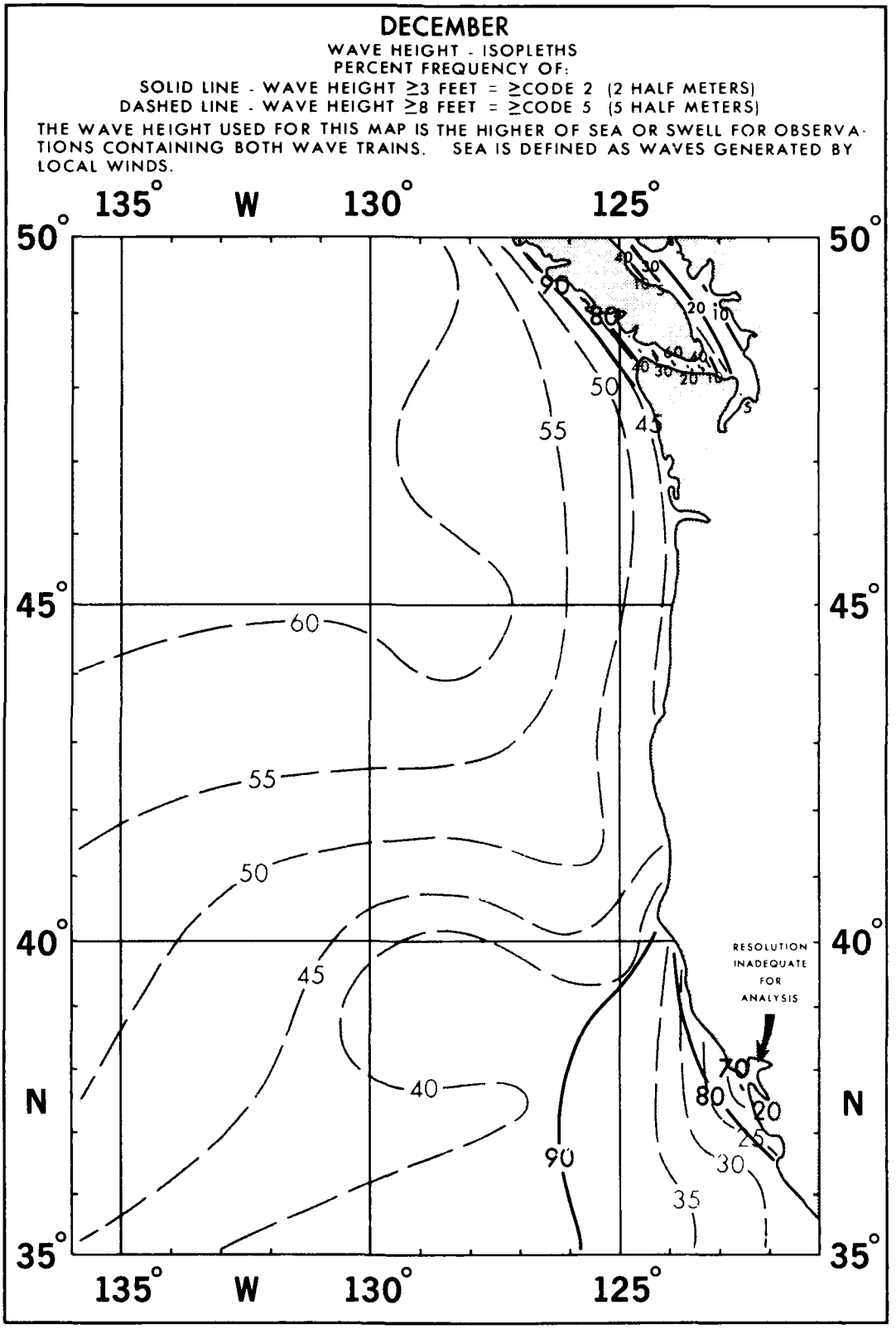

135° W 130° 125°
40° N 35°
DECEMBER
SURFACE
WIND ROSE

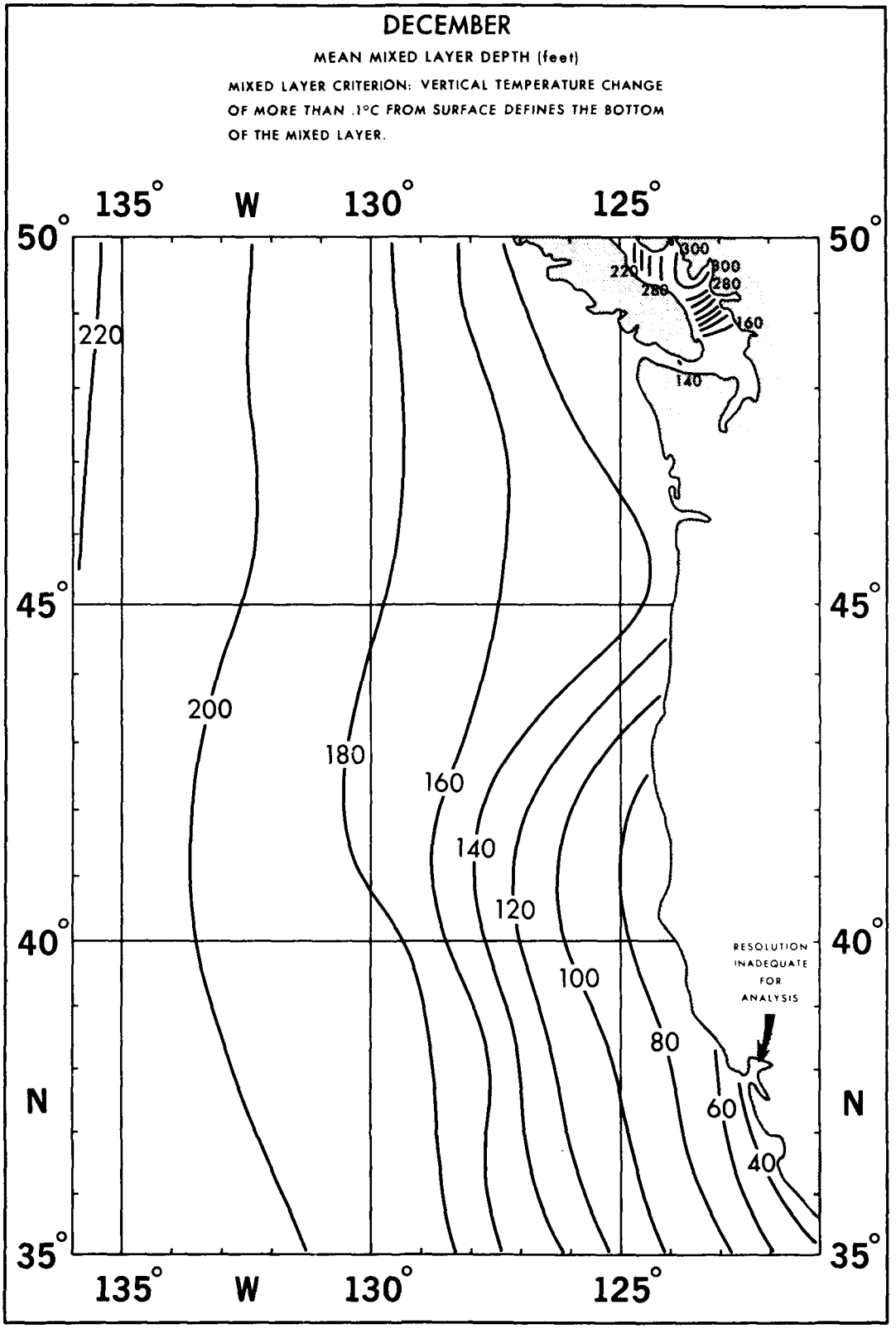

DECEMBER
MEAN AIR TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
46
45
44
43
42
45
RESOLUTION INADEQUATE FOR ANALYSIS

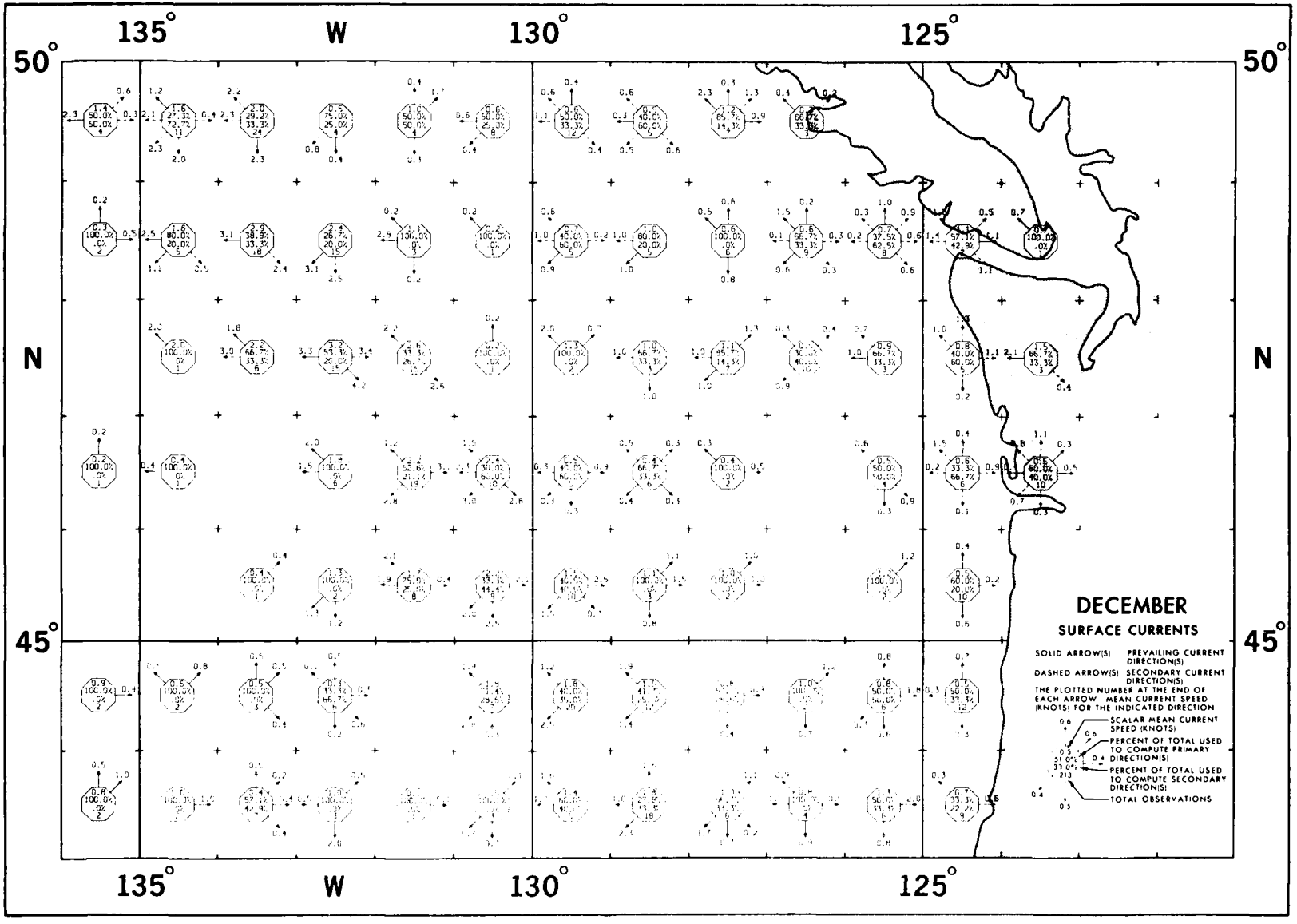

DECEMBER
MEAN SEA SURFACE TEMPERATURE (°F)
135° W 130° 125°
50°
45°
40°
35°
N
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
45
46
RESOLUTION INADEQUATE FOR ANALYSIS

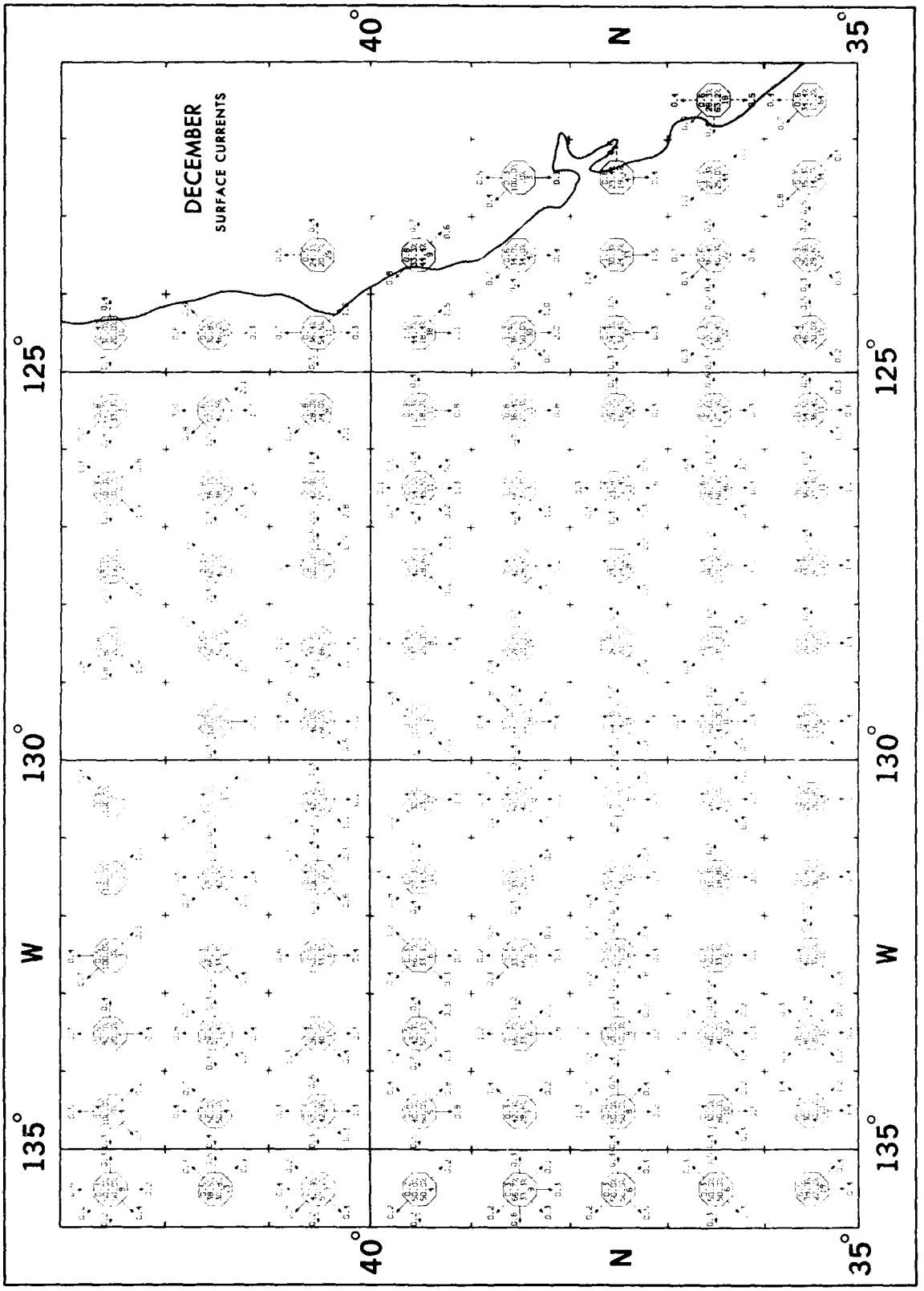

135° W 130° 125°
50°
N
45°
DECEMBER
WAVE HEIGHT-FREQUENCIES
PERCENT FREQUENCY OF VARIOUS RANGES WITHIN ONE-DEGREE QUADRANGLES.
≤2 10.0 EXAMPLE:
3-4 20.0 30.0% OF ALL
5-6 30.0 OBSERVED
7-9 20.0 WAVE
10-12 10.0 HEIGHTS
≥13 10.0 WERE IN THE
N = 1363 RANGE 5 TO 6 FEET.
N=OBSERVATION COUNT.
WAVE DATA FOR THESE TABLES WERE SELECTED FROM THE HIGHER OF SEA OR SWELL WHEN BOTH WERE REPORTED.


135° W 130° 125°
40°
N
35°
DECEMBER
WAVE HEIGHT-
FREQUENCIES


DECEMBER
WAVE HEIGHT - ISOPLETHS
PERCENT FREQUENCY OF:
SOLID LINE - WAVE HEIGHT ≥3 FEET = ≥CODE 2 (2 HALF METERS)
DASHED LINE - WAVE HEIGHT ≥8 FEET = ≥CODE 5 (5 HALF METERS)
THE WAVE HEIGHT USED FOR THIS MAP IS THE HIGHER OF SEA OR SWELL FOR OBSERVATIONS CONTAINING BOTH WAVE TRAINS. SEA IS DEFINED AS WAVES GENERATED BY LOCAL WINDS.
135° W 130° 125°
50°
45°
40°
35°
N
60
55
50
45
40
RESOLUTION INADEQUATE FOR ANALYSIS
90
80
70
35
30
20
10
5


DECEMBER
MEAN MIXED LAYER DEPTH (feet)
MIXED LAYER CRITERION: VERTICAL TEMPERATURE CHANGE OF MORE THAN .1°C FROM SURFACE DEFINES THE BOTTOM OF THE MIXED LAYER.
135° W 130° 125°
50°
45°
40°
35°
N
220
200
180
160
140
120
100
80
60
40
300
280
160
RESOLUTION INADEQUATE FOR ANALYSIS


135° W 130° 125°
50°
N
45°
DECEMBER
SURFACE CURRENTS
SOLID ARROW(S) PREVAILING CURRENT DIRECTION(S)
DASHED ARROW(S) SECONDARY CURRENT DIRECTION(S)
THE PLOTTED NUMBER AT THE END OF EACH ARROW MEAN CURRENT SPEED (KNOTS) FOR THE INDICATED DIRECTION
SCALAR MEAN CURRENT SPEED (KNOTS)
PERCENT OF TOTAL USED TO COMPUTE PRIMARY DIRECTION(S)
PERCENT OF TOTAL USED TO COMPUTE SECONDARY DIRECTION(S)
TOTAL OBSERVATIONS


DECEMBER
SURFACE CURRENTS
40°
N
35°
125°
130°
135°
W

STATION CLIMATIC SUMMARIES

The following Station Climatic Summaries for the U.S. stations are based on three-hourly observations and summary-of-the-day digital files which are archived at the National Climatic Data Center, Asheville, N.C. The period-of-record varies among stations, with most of the three-hourly data records beginning in 1955. Coding differences prior to that date prevented the compilation of a consistant data set. Summary-of-the-day records start at the beginning of the stations period-of-record, which is generally in the mid-1940's for most stations. The records end for all stations in 1986.

Data for the two Canadian stations were extracted from existing summaries which resulted in varying periods-of-record for the different elements for a single station.

Because of the varying periods-of-record, and some minor station and instrument relocations, some inconsistencies may appear in the summaries. For example, at a station the maximum 24-hour snowfall might be greater than the maximum monthly snowfall.

Summaries for the following stations appear in alphabetical order:

Alameda NAS, CA

Astoria, OR

Eugene, OR

Medford, OR

Moffett Field NAS, CA

Portland, OR

Quillayute, WA

Seattle-Tacoma, WA

Vancouver, BC (Canada)

Victoria, BC (Canada)

Whidbey Island NAS, WA

PREPARED BY: NOAA, ASHEVILLE

STATION NAME: ALAMEDA, CALIFORNIA
LOCATION: 37 47N 122 19W

ELEVATION: 15 FEET
PERIOD: 1948-1986

WBAN #: 23239

	TEMPERATURE (F)					PRECIPITATION (INCHES)						RELATIVE HUMIDITY		WIND			SURFACE WIND (MPH)			PREDOMINANT SKY CONDITION	MEAN NUMBER OF DAYS WITH									
	MEANS			EXTREME					SNOWFALL $					AVERAGE AMOUNT (LANGLEY)							PRECIPITATION			THUNDERSTORMS	VISIBILITY	TEMPERATURE			
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	MEAN	MAXIMUM	MINIMUM	MEAN	MAXIMUM	24-HR MAXIMUM *	0400 LST	1000 LST	AT 0700 LST	AT 1300 LST	PRESSURE ALTITUDE (TENS OF FEET)	DIRECTION	MEAN SPEED	MAX GUST		.01 OR MORE	.50 OR MORE	SNOWFALL $ ≥ 0.1	SNOWFALL $ ≥ 1.5	≤ 1/4 MI OR FOG	≥ 90	≥ 75	≤ 45	≤ 32
JAN	56	44	50	72	30	3.7	9.0	#	#	5.3	1	1	1	83	76	23	42	40	NNW	7	60	OVR	10	3	2	0	14	0	0	19	#
FEB	56	47	52	79	34	2.6	7.5	#	#	1.8	1	1	1	82	66	30	44	40	W	8	59	OVR	9	2	0	0	10	0	#	8	0
MAR	62	48	55	84	36	2.7	8.0	#	#	1.3	1	1	1	79	60	30	44	40	W	10	60	OVR	9	2	0	0	5	0	#	6	0
APR	64	50	58	93	38	1.5	5.5	#	#	0.6	1	1	1	74	57	31	45	30	W	10	46	SCT	6	1	0	0	3	0	#	4	0
MAY	67	52	60	101	42	0.6	3.1	#	#	0.2	1	0	0	81	56	33	48	25	W	11	42	CLR	7	1	0	0	4	1	#	2	0
JUN	70	54	62	101	46	0.1	1.1	#	#	0.1	1	0	0	84	57	38	51	25	W	11	43	CLR	4	#	0	0	4	1	#	0	0
JUL	71	55	63	101	48	0.1	0.8	#	#	0.1	1	0	0	86	59	41	53	20	W	10	35	CLR	3	#	0	0	2	#	#	0	0
AUG	71	56	64	102	40	0.1	0.4	#	#	0.1	1	0	0	87	60	42	54	20	W	9	35	CLR	3	#	0	0	3	#	#	1	0
SEP	74	57	66	106	50	0.3	2.0	#	#	0.2	1	0	0	84	55	42	53	25	W	9	42	CLR	4	1	0	0	6	1	1	0	0
OCT	70	55	63	101	44	1.1	8.2	#	#	0.5	1	0	0	81	55	38	51	25	W	9	55	CLR	4	1	0	0	9	0	#	0	0
NOV	63	50	57	85	38	2.4	7.4	#	#	1.2	1	1	1	80	62	32	46	30	W	7	61	OVR	9	2	0	0	12	0	1	3	0
DEC	58	45	51	78	27	3.3	11.1	#	#	1.7	1	1	1	83	68	29	43	35	NNW	7	63	OVR	9	2	0	0	15	0	0	15	#
ANN	64	51	58	106	27	17.7	35.4	6.8	5.3	1	1	1	92	60	14	48	35	W	9	63	CLR	60	11	3	0	95	1	4M	58	#
YRS	43	43	43	43	43	43	43	43	43	43	42	32	32	32	32	32	32	32	39	32	43	43	43	42	42	42	42	42	42	42

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME.

$ HAIL RECORDED AS SNOWFALL JULY 1948-DECEMBER 1955
SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970.

* 24-HOUR MAXIMUM IS FOR CALENDAR DAY

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 5 MI														
01	39	31	29	24	31	38	48	46	34	23	30	42	35	32
04	44	39	33	29	40	45	59	57	44	36	35	46	42	32
07	51	49	39	33	43	50	63	64	51	40	42	54	48	32
10	55	48	36	27	33	38	48	46	38	29	42	54	40	32
13	54	42	27	18	15	11	9	9	13	14	39	51	26	32
16	47	31	20	14	10	9	5	5	7	15	29	43	19	32
19	30	24	21	16	16	17	18	22	15	15	21	30	20	32
22	33	25	23	19	23	27	35	35	24	23	23	36	27	32
ALL HRS	45	37	29	23	26	29	34	35	29	28	35	46	33	32
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	25	21	22	18	29	38	48	45	33	25	22	28	30	32
04	29	28	25	24	37	44	59	57	43	32	26	31	36	32
07	36	35	29	27	40	49	63	64	46	35	32	38	41	32
10	36	34	25	19	23	31	37	38	31	28	31	39	31	32
13	31	24	17	12	12	11	8	9	9	13	22	32	16	32
16	24	17	13	8	8	9	4	4	5	9	16	24	12	32
19	20	16	15	11	12	16	17	21	14	11	14	19	16	32
22	21	16	17	14	22	26	34	35	23	19	15	22	22	32
ALL HRS	29	25	21	17	24	28	34	34	26	22	23	30	26	32
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	12	M	6	4	12	20	35	34	20	13	8	15	16	32
04	14	11	8	6	14	23	42	43	27	17	12	18	20	32
07	19	17	10	7	15	23	44	44	27	20	20	23	23	32
10	22	17	5	3	4	7	14	18	13	14	17	26	13	32
13	17	4	2	1	1	1	1	1	1	4	10	19	5	32
16	12	5	2	1	1	1	1	1	1	2	6	13	4	32
19	7	3	3	2	5	7	11	15	9	5	3	7	6	32
22	8	4	3	3	9	14	27	28	15	10	4	10	11	32
ALL HRS	14	10	5	3	9	12	22	23	14	11	10	17	12	32
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	4	2	1	1	2	4	9	8	4	3	2	5	4	32
04	6	5	2	1	2	5	10	10	6	5	4	7	5	32
07	9	8	3	1	2	4	8	9	5	7	8	8	6	32
10	6	6	2	#	0	0	0	#	#	2	4	8	2	32
13	3	1	#	#	0	0	0	0	#	#	2	3	1	32
16	1	#	#	#	0	0	0	#	#	#	1	2	#	32
19	2	#	#	0	0	#	1	1	#	#	1	1	1	32
22	3	#	#	#	#	1	2	4	2	2	1	3	2	32
ALL HRS	4	3	1	#	#	1	2	4	2	2	3	5	3	32
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI														
01	3	1	#	0	0	0	#	0	#	#	1	3	1	32
04	5	3	#	0	#	0	#	#	#	1	2	4	2	32
07	7	5	1	#	#	0	0	#	#	1	4	6	2	32
10	4	3	1	#	0	0	0	#	0	1	2	5	1	32
13	2	1	0	0	0	0	0	0	0	#	1	1	#	32
16	1	0	0	0	0	0	0	0	0	0	#	1	#	32
19	1	#	0	0	0	0	0	0	0	0	0	1	#	32
22	2	0	0	0	0	0	0	0	0	0	#	2	#	32
ALL HRS	3	2	#	#	#	0	#	#	#	1	1	3	1	32

ALAMEDA, CALIFORNIA

PREPARED BY: NOCD ASHEVILLE

STATION NAME: ASTORIA, WASHINGTON
LOCATION: 46 09N 123 53W

ELEVATION: 8 FEET
PERIOD: 1953-1986

WMO #: 72791
WBAN: 94224

	TEMPERATURE (F)					PRECIPITATION (INCHES)						RELATIVE HUMIDITY		VAPOR PRESSURE (INCHES OF MERCURY)	DEW POINT (F)	PRESSURE ALTITUDE (FEET, 99.95%)	SURFACE WIND (KTS)			CONDITION	MEAN NUMBER OF DAYS WITH									
	MEANS			EXTREME					SNOWFALL $								PREVAILING				PRECIPITATION						TEMPERATURE			
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM &	MEAN	MAXIMUM	24-HR MAXIMUM &	0400 LST	1300 LST				DIRECTION	MEAN SPEED	MAX GUST	PREDOMINANT SKY	>= 0.01	>= 0.50	SNOWFALL $ >= 0.1	SNOWFALL $ >= 1.5	THUNDERSTORMS	VISIBILITY < 7 MI IN FOG	>= 90	>= 75	<= 45	<= 32
JAN	47	35	42	67	11	9.7	16.7	.7	3.8	3	26	11	86	77	.22	36	80	E	7	65	OVR	21	7	1	1	1	18	0	0	28	10
FEB	51	37	44	72	19	7.4	11.8	2.1	2.8	1	12	2	86	75	.24	38	80	E	7	66	OVR	19	5	#	#	#	16	0	0	25	7
MAR	54	37	46	77	22	7.2	10.7	3.2	2.1	1	7	1	87	70	.24	39	70	S	11	61	OVR	21	5	1	#	#	16	0	0	28	5
APR	55	39	48	81	29	4.6	7.7	1.4	1.7	1	4	1	88	68	.21	41	50	W	W	46	OVR	18	3	#	0	#	12	0	#	27	2
MAY	60	44	52	87	31	3.0	6.0	.4	1.7	1	4	1	89	69	.31	49	30	W	W	53	OVR	15	3	0	0	#	12	0	#	10	#
JUN	64	49	57	91	37	2.6	5.5	.4	2.1	0	0	0	89	70	.37	50	25	WNW	9	38	OVR	13	2	0	0	#	15	#	1	5	0
JUL	67	52	60	92	39	1.2	4.4	.1	1.7	0	0	0	89	68	.41	53	15	NW	10	39	OVR	7	1	0	0	#	13	#	3	2	0
AUG	69	52	61	96	39	1.3	5.2	.1	1.5	0	0	0	91	69	.42	54	20	NW	10	32	OVR	7	1	0	0	#	19	#	4	2	0
SEP	67	49	58	95	33	3.5	6.9	1	1.8	1	1	1	90	68	.39	51	35	SE	5	48	OVR	11	3	0	0	#	18	#	4	7	0
OCT	60	43	52	85	26	5.9	12.6	1.0	3.5	1	1	1	89	72	.33	47	50	ESE	5	56	OVR	15	4	0	0	#	21	0	#	19	1
NOV	53	39	47	71	19	9.9	16.8	1.5	3.1	1	5	4	87	75	.26	41	70	E	7	59	OVR	20	7	#	#	#	17	0	0	23	4
DEC	48	36	43	64	8	11.2	15.9	2.7	3.6	1	5	4	86	79	.29	39	80	E	7	69	OVR	23	8	1	#	#	18	0	0	27	8
ANN	58	43	51	96	8	67.4	87.4	41.0	3.8	5	27	11	88	72	.30	44	55	E	8	69	OVR	191	46	4	1	#	203	#	14	212	38
YRS	31	31	31	31	31	31	31	31	31	31	31	31	32	32	10	32	32	32	32	17	32	31	31	31	31	31	31	31	31	31	31

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME.

$ HAIL RECORDED AS SNOWFALL JULY 1945-DECEMBER 1955.
SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970.

& 24-HOUR MAXIMUM IS FOR CALENDAR DAY.

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 5000 FEET AND/OR VISIBILITY LESS THAN 5 MI														
01	60	58	56	56	58	60	62	61	48	52	56	62	57	32
04	59	59	61	63	64	69	72	71	55	55	58	62	63	32
07	61	64	63	62	61	69	74	70	56	56	58	64	63	32
10	58	57	56	54	58	61	60	55	41	47	51	59	55	32
13	55	55	52	48	46	46	42	39	34	38	49	58	47	32
16	56	54	51	43	44	43	36	32	30	37	46	57	44	32
19	56	55	53	46	44	46	40	39	34	37	50	59	46	32
22	56	56	54	48	50	53	49	47	40	44	53	60	51	32
ALL HRS	57	56	56	54	54	57	55	52	43	47	54	62	54	32
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	42	39	35	36	37	46	51	52	35	37	35	44	41	32
04	42	41	39	40	45	54	60	61	41	39	39	42	45	32
07	44	46	43	42	44	52	60	60	41	42	40	44	46	32
10	43	40	39	39	39	44	48	44	31	33	33	42	40	32
13	40	37	36	32	30	31	30	27	21	25	33	42	32	32
16	42	39	34	29	27	31	26	23	19	25	29	41	30	32
19	38	36	35	30	29	33	32	30	25	25	31	43	32	32
22	40	39	33	30	33	39	41	39	28	31	32	41	35	32
ALL HRS	42	40	38	35	36	42	44	42	30	33	35	43	38	32
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	17	14	10	10	9	16	20	25	18	20	13	15	16	32
04	16	17	12	12	13	20	26	30	22	22	13	15	18	32
07	16	17	14	14	13	20	26	30	23	24	14	14	19	32
10	17	15	9	6	7	10	13	15	11	13	13	16	12	32
13	15	10	6	4	4	6	4	5	5	8	9	14	8	32
16	17	13	7	5	5	8	5	6	6	8	9	14	9	32
19	15	11	8	7	6	9	9	13	8	10	10	15	10	32
22	16	13	8	7	6	12	16	17	12	14	12	15	12	32
ALL HRS	16	14	9	8	8	12	15	18	14	15	12	15	13	32
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	7	6	4	3	3	6	7	12	9	9	5	7	6	32
04	7	7	6	5	4	6	9	14	12	11	6	7	8	32
07	7	8	6	5	5	6	10	15	12	14	7	7	9	32
10	5	5	2	1	1	#	1	2	3	4	5	5	3	32
13	4	2	1	#	#	#	#	#	#	2	4	4	1	32
16	4	2	1	1	#	#	#	1	1	2	1	3	1	32
19	5	3	1	1	1	1	2	4	3	3	3	5	3	32
22	6	4	2	2	2	4	6	7	6	7	5	7	5	32
ALL HRS	6	5	3	2	2	3	5	7	6	7	4	6	5	32
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI														
01	4	4	2	1	1	1	1	5	5	6	3	4	3	32
04	3	4	3	3	1	2	4	7	8	8	4	4	4	32
07	3	5	4	3	1	2	2	3	9	10	5	4	5	32
10	2	2	1	#	0	0	0	0	#	1	2	2	1	32
13	1	1	0	0	0	0	0	0	0	0	#	1	#	32
16	1	1	#	0	0	0	0	0	0	#	#	1	#	32
19	2	1	#	#	#	#	#	#	#	1	1	1	1	32
22	4	3	1	1	#	#	1	2	2	3	3	3	2	32
ALL HRS	2	2	1	1	#	1	1	3	3	4	2	3	2	32

ASTORIA, WASHINGTON

PREPARED BY: NOCD ASHEVILLE

STATION NAME: EUGENE, OREGON
LOCATION: 44 07N 123 13W

ELEVATION: 359 FEET
PERIOD: 1948-1986

WMO #: 72693
WBAN: 24221

	TEMPERATURE (F) MEANS			TEMPERATURE (F) EXTREME		PRECIPITATION (INCHES)				SNOWFALL $			RELATIVE HUMIDITY		VAPOR PRESSURE (MILLIBARS)	DEW POINT (F)	PRESSURE ALTITUDE (1000 FEET)	SURFACE WIND (KTS)			PREDOMINANT SKY CONDITION	MEAN NUMBER OF DAYS WITH PRECIPITATION				THUNDERSTORMS	VISIBILITY	TEMPERATURE			
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM*	MEAN	MAXIMUM	24-HR MAXIMUM*	0400 LST	1300 LST				PREVAILING DIRECTION	PREVAILING MEAN SPEED	MAX GUST		>= 0.01	>= 0.50	SNOWFALL $ >= 0.1	SNOWFALL $ >= 1.5		< 7 MI IN FOG	>= 90	>= 75	<= 45	<= 32
JAN	45	32	39	67	-4	7.8	14.8	3	4.2	6	42	14	90	80	21	35	105	S	9	57	OVR	18	8	2	1	#	18	0	0	29	14
FEB	51	34	43	66	8	5.9	14.3	7	3.8	11	6	3	91	75	23	38	105	S	9	46	OVR	15	4	1	#	#	14	0	0	26	9
MAR	54	36	46	77	20	5.2	12.4	8	2.3	1	11	5	90	66	24	39	95	S	9	52	OVR	16	3	1	#	#	11	0	#	29	7
APR	60	39	49	86	27	2.8	6.9	1	2.1	1	1	1	90	60	24	40	80	S	8	50	OVR	12	1	0	0	#	7	0	1	27	3
MAY	67	42	55	93	28	2.1	4.4	1	1.6	1	1	1	90	57	31	45	65	N	8	44	OVR	10	1	0	0	1	6	#	0	22	1
JUN	74	48	61	100	32	1.4	4.1	1	1.6	1	1	1	89	52	36	50	60	N	8	31	OVR	6	1	0	0	1	5	1	13	9	#
JUL	82	50	66	105	39	.3	1.8	1	1.0	0	0	0	87	43	38	51	55	N	9	44	CLR	2	#	0	0	#	2	6	25	3	0
AUG	81	51	66	108	38	.9	5.8	1	1.9	1	1	1	87	44	39	51	55	N	9	34	CLR	4	1	0	0	#	5	5	25	3	0
SEP	75	47	62	98	32	1.6	4.7	1	1.3	1	1	1	89	49	35	49	65	N	9	30	CLR	6	1	0	0	1	10	2	16	11	#
OCT	64	41	53	94	19	3.7	12.7	1	3.6	1	1	1	93	65	31	45	75	S	7	37	OVR	11	3	0	0	#	20	#	3	22	2
NOV	52	37	45	76	12	7.5	20.5	1	4.2	3	12	4	93	77	26	41	95	S	9	50	OVR	16	5	#	#	#	20	0	#	25	8
DEC	41	34	41	68	-1	8.8	21.0	1	4.9	11	10	5	91	82	27	37	100	S	9	56	OVR	14	5	1	#	#	19	0	0	29	11
ANN	63	41	52	108	-1	47.3	64.0	29.3	4.9	7	42	14	90	62	29	43	85	N	9	57	OVR	133	30	4	2	4	131	11	90	236	56
YRS	39	39	39	39	39	39	39	39	39	39	39	39	32	32	32	32	32	32	32	16	32	39	39	39	39	39	39	39	39	39	39

LESS THAN 0.5 DAYS; 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE.

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME.

$ HAIL RECORDED AS SNOWFALL JULY 1948-DECEMBER 1955.
SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970.

* 24-HOUR MAXIMUM IS FOR CALENDAR DAY.

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 5000 FEET AND/OR VISIBILITY LESS THAN 5 MI														
01	64	53	42	37	32	30	18	19	19	45	64	68	41	32
04	69	60	52	45	42	41	26	25	31	55	68	71	49	32
07	68	65	61	52	48	46	33	37	46	68	71	74	56	32
10	65	62	57	52	45	46	28	29	37	60	66	69	52	32
13	60	54	47	43	37	31	17	20	22	44	60	67	42	32
16	54	45	42	31	29	23	11	13	17	29	49	62	34	32
19	56	44	35	29	24	20	10	11	16	30	51	62	32	32
22	57	46	37	32	27	24	13	15	16	34	56	66	35	32
ALL HRS	63	55	48	42	36	33	20	22	27	47	62	68	43	32
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	46	31	23	17	13	16	10	9	9	29	43	48	25	32
04	50	40	29	22	22	25	16	16	18	39	49	50	31	32
07	51	45	39	29	26	28	23	26	31	52	51	53	38	32
10	48	43	37	36	29	28	21	20	29	43	48	49	35	32
13	42	35	27	19	14	14	7	8	9	24	38	47	23	32
16	34	26	21	12	9	7	3	4	6	12	25	43	17	32
19	36	25	17	10	8	5	2	5	6	13	30	43	17	32
22	41	27	19	12	8	9	5	6	7	18	37	42	20	32
ALL HRS	44	34	27	20	17	17	11	12	14	29	41	48	26	32
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	26	13	4	1	1	1	#	1	2	19	25	24	10	32
04	28	19	10	5	4	4	3	3	8	27	28	26	14	32
07	26	22	17	10	8	8	6	10	20	40	32	29	19	32
10	26	23	11	3	2	1	1	2	7	28	29	29	14	32
13	19	11	3	#	#	#	#	1	1	10	14	22	7	32
16	14	6	2	#	0	#	#	1	1	4	11	18	5	32
19	15	6	2	#	#	#	#	#	1	5	12	18	5	32
22	20	9	1	#	#	#	#	1	1	10	18	21	7	32
ALL HRS	22	14	6	3	2	2	1	2	5	18	21	24	10	32
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	20	10	3	#	#	#	#	#	1	14	19	19	7	32
04	21	14	7	1	1	2	1	1	5	22	22	19	10	32
07	19	17	11	7	4	3	1	3	12	30	25	22	13	32
10	17	12	8	#	#	#	0	#	3	15	19	21	8	32
13	9	3	#	0	0	0	0	0	#	2	5	12	3	32
16	6	2	1	0	0	0	0	0	#	1	4	10	2	32
19	9	3	1	0	0	0	0	0	#	2	7	12	3	32
22	15	5	#	#	0	0	0	0	#	#	6	13	5	32
ALL HRS	14	8	3	1	1	1	#	#	1	3	11	14	6	32
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI														
01	14	7	2	#	#	0	0	#	1	13	14	14	6	32
04	15	11	5	2	1	1	#	1	4	20	19	13	8	32
07	14	14	8	4	1	1	#	1	9	25	22	17	10	32
10	11	8	1	0	0	0	0	0	#	7	11	14	4	32
13	3	1	0	0	0	0	0	0	0	4	4	5	1	32
16	2	#	0	0	0	0	0	0	#	#	1	5	1	32
19	6	2	0	0	0	0	0	0	#	1	3	8	2	32
22	11	3	#	0	0	0	0	0	#	5	10	11	3	32
ALL HRS	9	6	2	1	#	#	#	#	2	8	10	11	4	32

EUGENE, OREGON

PREPARED BY: NCDC ASHEVILLE

STATION NAME: MEDFORD, OREGON
LOCATION: 42 22N 122 52W

ELEVATION: 1298 FEET
PERIOD: 1948-1986

WMO #: 72597
WBAN: 24225

	TEMPERATURE (F)					PRECIPITATION (INCHES)						RELATIVE HUMIDITY		VAPOR PRESSURE INCHES OF MERCURY	DEW POINT (F)	PRESSURE ALTITUDE (FEET ABV SEA)	SURFACE WIND (KTS)			PREDOMINANT SKY CONDITION	MEAN NUMBER OF DAYS WITH									
	MEANS			EXTREMA					SNOWFALL $								PREVAILING				PRECIPITATION				THUNDERSTORMS	VISIBILITY	TEMPERATURE			
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM*	MEAN	MAXIMUM	24-HR MAXIMUM*	0400 LST	1300 LST				DIRECTION	MEAN SPEED	MAX GUST		>= 0.01	>= 0.50	SNOWFALL >= 0.1	SNOWFALL >= 1.0		< 1/4 MI IN FOG	>= 90	>= 75	<= 45	<= 32
JAN	45	30	38	71	0	3.1	6.2	2	2.3	3	20	7	90	77	.18	32	195	N	5	49	OVR	13	2	3	1	0	20	0	0	30	20
FEB	52	32	42	77	7	2.3	5.7	2	1.9	1	12	4	88	66	.20	34	195	N	5	41	OVR	12	1	1	#	#	13	0	4	27	15
MAR	57	34	46	81	16	1.8	5.5	1	1.4	1	18	5	86	55	.21	35	185	N	5	46	OVR	12	1	1	#	#	6	0	1	30	12
APR	63	37	51	90	24	1.0	3.1	#	1.0	1	4	4	84	48	.23	36	175	WNW	8	41	OVR	9	#	#	#	#	2	#	5	28	6
MAY	72	43	58	101	28	1.1	4.2	1	1.7	1	1	1	83	42	.27	42	160	WNW	8	34	OVR	8	#	0	0	#	2	#	2	13	21	1
JUN	81	49	65	109	31	.7	2.9	1	.8	1	1	1	79	36	.32	46	155	WNW	8	46	CLR	5	#	0	0	#	1	#	1	7	2	#
JUL	90	54	72	108	38	.2	1.6	1	1.1	0	0	0	73	30	.34	48	150	WNW	8	38	CLR	2	#	0	0	#	1	#	#	1	0	0
AUG	88	53	71	114	39	.4	2.8	1	.7	1	1	1	75	32	.34	48	155	WNW	8	40	CLR	2	#	0	0	#	1	#	1	1	0	0
SEP	82	47	65	107	29	.8	4.2	1	2.8	1	1	1	79	36	.30	45	160	WNW	7	48	CLR	4	#	0	0	#	2	#	2	8	1	#
OCT	68	39	54	95	18	1.8	9.2	1	2.6	1	1	1	87	51	.24	41	165	S	5	35	OVR	8	1	#	0	#	12	1	9	26	4
NOV	52	34	44	75	10	3.0	7.0	.2	2.9	1	11	7	91	71	.22	37	180	N	5	54	OVR	13	2	#	#	#	20	0	#	28	11
DEC	44	31	38	72	-6	3.5	12.7	.4	3.3	2	12	4	91	81	.19	33	185	N	5	51	OVR	14	2	2	#	#	22	0	0	31	17
AP.	66	40	54	114	-6	19.9	30.2	10.4	3.3	9	23	7	84	52	.25	40	175	WNW	6	54	OVR	102	10	7	2	9	103	52	131	241	86
YRS	39	39	39	39	39	39	39	39	39	39	39	39	32	32	32	32	32	32	32	36	32	39	39	39	39	39	39	39	39	39	39

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE.

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SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970.

* 24-HOUR MAXIMUM IS FOR CALENDAR DAY.

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 5000 FEET AND/OR VISIBILITY LESS THAN 5 MI														
01	59	31	23	22	20	13	4	5	10	22	50	65	27	32
04	62	38	31	33	25	17	6	7	13	29	61	71	33	32
07	66	46	37	38	24	19	8	10	15	41	69	74	37	32
10	69	51	32	26	17	10	4	5	10	39	69	74	34	32
13	54	28	23	16	12	7	3	2	5	17	46	61	23	32
16	43	22	20	14	11	6	#	#	5	12	36	49	18	32
19	44	23	19	14	11	5	1	#	6	15	38	54	19	32
22	51	25	21	18	16	10	2	3	8	19	45	61	23	32
ALL HRS	57	34	26	23	17	11	3	5	9	25	52	64	27	32
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	42	15	7	6	3	3	1	1	3	9	33	50	14	32
04	47	22	12	13	8	3	1	2	5	17	43	57	19	32
07	53	33	20	20	8	5	2	4	7	28	53	60	24	32
10	57	34	14	8	4	2	#	2	4	23	53	61	22	32
13	36	14	6	4	2	1	#	1	2	6	27	43	12	32
16	24	8	5	2	1	1	#	1	1	3	18	31	8	32
19	26	8	4	3	2	1	#	#	1	3	21	35	9	32
22	32	10	6	5	2	1	#	1	2	6	25	44	11	32
ALL HRS	40	18	9	8	4	2	1	2	3	12	34	48	15	32
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	16	10	2	1	#	#	0	#	1	5	26	43	10	32
04	42	16	5	3	#	#	#	1	2	13	36	48	14	32
07	46	27	13	12	3	1	#	1	3	23	46	50	19	32
10	52	28	7	1	#	#	0	#	1	8	45	53	17	32
13	29	7	1	0	0	0	0	#	#	3	19	35	8	32
16	19	4	1	#	0	0	0	#	#	1	13	26	5	32
19	20	4	1	#	0	#	0	#	#	1	14	28	6	32
22	27	6	1	1	0	#	0	#	#	2	19	36	8	32
ALL HRS	34	13	4	3	1	#	#	#	1	8	28	40	11	32
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	24	6	1	0	#	0	0	0	#	3	17	30	7	32
04	30	10	3	1	1	#	0	#	1	8	26	36	10	32
07	34	18	7	5	1	#	0	1	2	16	36	39	13	32
10	32	14	2	#	0	0	0	#	#	6	27	35	10	32
13	15	4	#	0	0	0	0	#	0	2	9	20	4	32
16	10	1	#	0	0	0	0	0	0	#	4	15	2	32
19	12	1	0	0	0	0	0	0	0	#	8	19	3	32
22	17	3	1	#	0	0	0	0	0	1	11	24	5	32
ALL HRS	22	7	2	1	#	#	0	#	#	4	17	27	7	32
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI														
01	20	4	1	0	0	0	0	0	#	2	13	25	6	32
04	25	8	2	1	#	0	0	#	1	6	21	30	8	32
07	28	14	4	4	#	0	0	#	1	13	29	32	11	32
10	22	10	1	0	0	0	0	0	0	4	16	26	6	32
13	8	1	#	0	0	0	0	0	0	0	5	12	2	32
16	6	#	0	0	0	0	0	0	0	0	2	11	2	32
19	9	1	0	0	0	0	0	0	0	0	5	14	2	32
22	13	2	#	0	0	0	0	0	0	#	9	19	4	32
ALL HRS	17	5	1	1	#	#	0	#	#	3	12	21	5	32

MEDFORD, OREGON

PREPARED BY: NCDC ASHEVILLE STATION: NAME [illegible], CALIFORNIA ELEVATION: [illegible]
LOCATION: 37 25N 122 [illegible] PERIOD: 1945-1966 WBAN: 23244

	TEMPERATURE (F) MEANS MAXIMUM	MEANS MINIMUM	MEANS AVERAGE	EXTREMES MAXIMUM	EXTREMES MINIMUM	PRECIPITATION (INCHES) MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM	SNOWFALL MEAN	SNOWFALL MAXIMUM	24-HR MAXIMUM	RELATIVE HUMIDITY (%) 0400 LST	1600 LST	VAPOR PRESSURE INCHES OF MERCURY	DEW POINT (F)	PRESSURE ALTITUDE TENS OF FEET 99.95%	SURFACE WIND (KTS) PREVAILING DIRECTION	PREVAILING MEAN SPEED	MAX GUST	PREDOMINANT SKY CONDITION	MEAN NUMBER OF DAYS WITH PRECIPITATION >= 0.01	>= 0.50	SNOWFALL * >= 0.1	>= 1.0	THUNDERSTORMS	VISIBILITY < 7 MI (M-FOG)	TEMPERATURE >= 90	>= 75	<= 45	<= 32
JAN	57	41	49	76	21	2.8	6.8	2	2.7	1	7	2	82	63	.26	41	35	N	5	56	OVR	9	2	#	#	#	13	0	#	23	3
FEB	60	44	52	82	24	2.2	7.8	#	2.7	1	7	1	81	63	.28	43	40	NNW	7	56	OVR	9	1	0	0	#	9	0	#	16	1
MAR	62	44	54	84	30	2.2	6.4	#	1.5	1	7	1	79	56	.28	43	35	NNW	8	44	OVR	10	1	0	0	#	4	0	#	16	#
APR	66	47	57	91	32	1.0	4.9	#	1.1	0	6	0	78	51	.30	44	30	NNW	9	43	SCT	6	1	0	0	#	4	#	4	11	#
MAY	69	50	60	101	38	#	1.7	#	1.1	0	2	1	74	51	.34	47	25	NNW	9	38	SCT	3	#	0	0	#	3	1	#	3	0
JUN	73	54	64	104	43	1	5	#	4	0	0	0	80	55	.39	52	25	NNW	10	40	CLR	1	0	0	0	#	2	1	11	#	0
JUL	74	57	66	101	45	1	.5	#	4	0	0	0	83	58	.43	54	20	NNW	9	33	CLR	#	0	0	0	#	5	1	13	#	0
AUG	74	57	66	100	47	1	6	#	5	0	0	0	82	57	.44	55	25	NNW	9	34	CLR	1	#	0	0	#	7	1	14	0	0
SEP	75	56	66	105	41	.2	2.0	#	2.0	0	0	0	79	52	.41	53	30	NNW	8	33	CLR	1	#	0	0	#	7	2	14	#	0
OCT	71	52	62	97	33	.2	3.5	#	2.5	1	3	1	78	53	.36	49	25	NNW	7	48	CLR	3	#	0	0	#	10	#	9	3	0
NOV	64	46	55	87	29	1.9	5.6	#	2.8	0	0	0	80	57	.30	44	30	NNW	6	41	SCT	7	1	0	0	#	11	0	1	13	#
DEC	57	42	50	76	27	2.3	9.6	.2	2.3	1	7	1	82	64	.26	41	35	N	5	54	OVR	9	1	0	0	#	15	0	#	22	1
ANN	67	49	58	105	21	13.7	31.4	6.0	2.8	1	7	2	80	56	.33	47	35	NNW	8	56	CLR	59	7	#	#	3	91	5	75	106	5
YRS	43	42	43	42	42	42	43	42	42	42	42	42	32	32	32	32	32	32	32	32	32	42	42	42	42	42	42	42	42	42	42

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE.

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* MAIL RECORDED AS SNOWFALL JULY 1948-DECEMBER 1955.
SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970.

+ 24-HOUR MAXIMUM IS FOR CALENDAR DAY.

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 5000 FEET AND/OR VISIBILITY LESS THAN 5 MI														
01	42	34	29	21	25	28	35	33	37	28	31	46	32	32
04	44	38	33	27	33	36	47	45	48	33	33	47	38	32
07	48	42	36	31	37	40	51	51	43	39	38	53	43	32
10	52	47	37	28	27	23	21	25	35	44	46	56	36	32
13	50	42	33	21	15	8	6	6	17	29	39	53	26	32
16	41	33	25	16	8	5	2	3	6	17	32	45	20	32
19	38	29	23	15	8	4	1	2	4	15	28	41	17	32
22	40	32	23	15	15	14	13	16	15	22	30	42	23	32
ALL HRS	46	38	30	22	23	20	22	21	23	29	36	49	30	32
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	21	18	16	12	20	25	34	31	24	21	17	27	22	32
04	26	23	20	17	28	34	46	43	34	27	20	29	29	32
07	30	25	24	20	30	36	48	48	38	30	25	36	33	32
10	33	27	21	13	12	10	12	20	29	27	27	37	21	32
13	26	16	10	6	4	3	1	1	3	10	15	29	10	32
16	17	12	8	4	3	2	1	1	2	5	11	22	7	32
19	18	12	9	6	4	2	1	1	2	6	10	19	7	32
22	19	15	12	7	10	12	13	15	12	14	15	22	14	32
ALL HRS	24	19	15	11	14	16	19	19	17	18	19	28	18	32
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	11	6	4	2	3	5	18	15	8	8	8	17	9	32
04	15	9	5	3	6	8	24	21	13	12	10	18	12	32
07	19	12	7	4	5	6	19	19	16	17	16	23	14	32
10	24	16	6	2	1	#	2	3	7	17	18	28	10	32
13	15	6	1	#	#	0	#	#	1	6	9	19	5	32
16	8	3	1	#	0	0	0	#	#	2	5	14	3	32
19	8	3	#	#	0	0	0	#	#	2	4	11	2	32
22	9	4	2	1	1	1	5	7	3	4	6	13	5	32
ALL HRS	14	8	4	2	2	3	8	8	6	9	10	18	8	32
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	4	2	1	0	#	0	0	0	#	1	1	5	1	32
04	6	5	2	#	#	#	#	1	1	3	4	8	2	32
07	10	8	2	#	0	0	#	1	2	6	7	12	4	32
10	9	5	1	0	0	0	0	0	0	2	4	9	3	32
13	2	#	0	0	0	0	0	0	0	0	#	3	#	32
16	1	#	0	#	0	0	0	#	0	0	#	1	#	32
19	1	#	0	0	0	0	0	0	0	0	#	2	#	32
22	2	#	#	0	0	0	0	#	0	#	1	4	1	32
ALL HRS	4	3	1	#	#	#	#	#	#	1	2	5	1	32
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI														
01	2	1	#	0	0	0	0	0	0	#	#	3	1	32
04	4	2	#	0	0	0	0	#	#	1	2	5	1	32
07	7	5	1	#	0	0	0	#	1	3	5	9	3	32
10	6	3	#	0	0	0	0	0	0	1	2	6	2	32
13	1	#	0	0	0	0	0	0	0	0	0	1	#	32
16	1	0	0	#	0	0	0	0	0	0	#	1	#	32
19	1	#	0	0	0	0	0	0	0	0	#	1	#	32
22	1	#	#	0	0	0	0	#	0	0	#	2	#	32
ALL HRS	3	1	#	#	0	0	0	#	#	1	1	4	1	32

MOFFETT FIELD, CALIFORNIA

STATION NAME: PORTLAND, OREGON
LOCATION: 45 36N 122 36W
ELEVATION: 21 FEET
PERIOD: 1948-1986
WMO #: 72698
WBAN: 24229

	TEMPERATURE (F) MEANS MAXIMUM	MEANS MINIMUM	MEANS AVERAGE	EXTREME MAXIMUM	EXTREME MINIMUM	PRECIPITATION (INCHES) MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM*	SNOWFALL $ MEAN	SNOWFALL $ MAXIMUM	SNOWFALL $ 24-HR MAXIMUM*	RELATIVE HUMIDITY 0400 LST	RELATIVE HUMIDITY 1300 LST	VAPOR PRESSURE (INCHES OF MERCURY)	DEW POINT (F)	PRESSURE ALTITUDE (TENS OF FEET (99.95%))	SURFACE WIND (KTS) PREVAILING DIRECTION	MEAN SPEED	MAX GUST	PREDOMINANT SKY CONDITION	MEAN NUMBER OF DAYS WITH PRECIPITATION >= 0.01	>= 0.50	SNOWFALL $ >= 0.1	>= 1.5	THUNDERSTORMS	VISIBILITY < 7 MI IN FOG	TEMPERATURE >= 90	>= 75	<= 45	<= 32
JAN	44	33	39	63	-2	5.7	12.8	.1	2.5	4	41	9	85	75	.19	33	70	ESE	11	55	OVR	19	4	5	1	#	15	0	0	30	13
FEB	50	35	43	70	8	4.3	9.5	.4	1.8	1	13	5	84	70	.21	36	70	ESE	10	54	OVR	16	2	1	#	#	12	0	0	26	8
MAR	54	37	46	74	19	3.6	7.5	1.1	1.5	1	13	8	85	63	.23	37	65	ESE	9	62	OVR	17	1	4	#	1	9	0	0	29	5
APR	61	40	51	87	29	2.5	4.7	.5	1.2	1	1	1	85	59	.25	40	50	WNW	7	55	OVR	14	1	1	0	1	7	0	#	25	1
MAY	66	44	55	100	29	2.3	4.8	.4	1.5	1	1	1	84	56	.30	45	35	NW	8	42	OVR	12	1	#	0	1	5	#	0	12	0
JUN	73	52	63	100	39	1.6	4.1	1	1.7	1	1	1	82	54	.36	44	30	NW	8	34	OVR	9	1	0	0	1	4	1	11	1	0
JUL	79	56	68	107	43	.5	2.2	T	.9	0	0	0	80	49	.40	52	25	NW	8	30	CLR	4	#	0	0	1	3	4	24	#	0
AUG	79	56	68	107	44	1.1	4.5	T	1.5	0	0	0	82	50	.41	53	25	NW	8	33	CLR	5	1	0	0	1	6	4	21	#	0
SEP	73	51	63	99	34	1.8	4.3	T	2.2	T	T	T	85	52	.37	50	35	NW	7	44	OVR	8	1	0	0	1	13	1	13	4	0
OCT	63	44	54	90	26	3.1	7.0	.4	1.7	T	T	T	89	64	.33	46	45	ESE	8	77	OVR	13	2	#	0	#	17	#	3	17	1
NOV	52	38	46	78	13	5.5	11.4	.8	2.4	1	8	7	87	72	.24	39	65	ESE	10	62	OVR	18	3	#	#	#	17	0	0	25	6
DEC	46	35	41	64	6	6.2	11.3	1.4	2.1	2	16	8	86	78	.21	34	70	ESE	11	50	OVR	20	4	1	#	#	16	0	0	30	10
ANN	63	44	53	107	-3	37.7	51.1	22.5	2.5	8	45	9	85	62	28	43	55	ESE	9	77	OVR	155	20	5	2	7	130	10	78	199	44
YRS	39	39	39	39	39	39	39	39	39	39	39	39	32	32	32	32	32	32	32	39	32	39	39	39	39	39	39	39	39	39	39

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE.

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME.

$ HAIL RECORDED AS SNOWFALL JULY 1948-DECEMBER 1959.
SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970

* 24-HOUR MAXIMUM IS FOR CALENDAR DAY.

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 5000 FEET AND/OR VISIBILITY LESS THAN 5 MI														
01	54	46	40	36	31	28	20	18	22	37	51	60	37	32
04	56	52	47	42	38	39	32	33	35	52	58	62	46	32
07	58	57	57	48	48	47	43	48	48	62	61	63	53	32
10	57	55	52	48	45	42	35	38	39	54	56	63	49	32
13	53	50	47	40	36	33	29	28	34	38	46	57	39	32
16	50	44	37	35	29	24	22	22	27	27	40	53	32	32
19	51	40	32	28	23	18	18	21	25	26	41	55	29	32
22	50	40	34	28	24	21	22	23	26	29	44	56	31	32
ALL HRS	53	49	44	38	35	32	29	29	32	41	51	59	40	32
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	34	23	16	10	9	10	7	6	9	20	29	37	18	32
04	36	28	20	16	15	19	17	18	20	33	36	38	25	32
07	38	35	29	23	22	27	30	32	31	44	40	41	33	32
10	38	33	27	24	20	22	21	22	23	34	36	41	29	32
13	32	27	19	13	9	10	5	6	8	16	25	35	17	32
16	30	19	13	9	6	5	3	3	4	9	19	30	12	32
19	28	16	10	6	5	4	2	3	4	8	18	31	11	32
22	30	17	12	8	5	6	3	4	4	12	21	32	13	32
ALL HRS	34	25	19	14	12	13	11	12	13	22	28	36	20	32
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	15	8	2	1	1	1	#	1	2	11	13	17	6	32
04	17	11	5	3	2	3	3	3	6	22	19	18	10	32
07	19	17	13	8	5	4	8	11	10	33	21	20	15	32
10	18	15	7	2	1	1	1	1	2	20	18	19	9	32
13	13	5	1	1	#	#	#	#	1	5	7	12	4	32
16	11	3	1	#	#	#	0	#	1	3	5	11	3	32
19	10	2	1	#	#	1	#	1	1	2	5	11	3	32
22	11	4	1	#	#	1	#	1	1	4	9	13	4	32
ALL HRS	14	8	4	2	1	1	2	2	5	13	12	15	7	32
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	10	5	1	#	#	#	0	#	1	7	8	12	4	32
04	11	8	4	2	1	1	#	1	5	16	14	11	6	32
07	13	12	9	5	1	1	1	3	11	25	16	12	9	32
10	10	8	3	1	#	0	0	#	4	9	9	10	4	32
13	4	2	0	0	0	0	0	0	0	#	2	4	1	32
16	3	1	0	0	0	0	0	0	0	#	1	4	1	32
19	4	1	#	0	0	#	0	0	#	#	2	6	1	32
22	6	2	#	#	#	#	0	0	0	2	4	8	2	32
ALL HRS	8	5	2	1	#	#	#	#	2	8	7	9	4	32
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI														
01	7	3	1	#	#	0	0	0	#	5	6	7	2	32
04	7	6	2	2	#	#	0	#	3	13	10	8	4	32
07	9	10	6	3	#	0	0	#	6	18	11	8	6	32
10	6	5	1	0	0	0	0	0	#	3	5	6	2	32
13	2	1	0	0	0	0	0	0	0	0	#	2	#	32
16	2	#	0	0	0	0	0	0	0	0	1	2	#	32
19	2	#	0	0	0	0	0	0	0	#	1	4	1	32
22	4	1	#	0	0	0	0	0	0	1	3	5	1	32
ALL HRS	5	3	1	1	#	#	#	#	1	5	5	5	2	32

PORTLAND, OREGON

[illegible] [illegible] [illegible]

STATION NAME: QUILLAYUTE, WASHINGTON
LOCATION: 47 57N 124 33W

ELEVATION: 171 FEET
PERIOD: 1966-1986

WMO #: 72797
WBAN: 94240

	TEMPERATURE (F) MEANS			TEMPERATURE (F) EXTREMI		PRECIPITATION (INCHES)				SNOWFALL $			RELATIVE HUMIDITY		VAPOR PRESSURE INCHES OF MERCURY	DEW POINT *	PRESSURE ALTITUDE TENTHS OF FEET	SURFACE WIND (KTS) PREVAILING			PREDOMINANT SKY CONDITION	MEAN NUMBER OF DAYS WITH PRECIPITATION				THUNDERSTORMS	VISIBILITY	TEMPERATURE			
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM *	MEAN	MAXIMUM	24-HR MAXIMUM *	0400 LST	1300 LST				DIRECTION	MEAN SPEED	MAX GUST		>= 0.01	>= 0.50	SNOWFALL >= 0.1	SNOWFALL >= 1.5		< 7 MI IN FOG	<= 90	>= 75	<= 45	<= 32
JAN	45	33	40	65	7	13.7	23.3	1.2	7.2	6	40	8	91	82	21	36	105	NE	7	45	OVC	22	6	4	1	1	20	0	0	29	14
FEB	49	34	42	72	15	12.8	20.1	5.1	5.1	5	14	7	92	77	23	37	100	S	8	50	OVC	20	5	2	1	#	19	0	0	26	10
MAR	51	35	43	70	19	11.7	21.9	7.4	4.8	5	14	6	92	72	24	38	95	S	8	43	OVC	21	5	2	#	#	19	0	0	28	11
APR	54	39	46	79	24	7.5	17.9	2.8	2.8	2	11	4	91	67	25	38	70	S	8	38	OVC	20	5	1	#	#	16	0	#	29	6
MAY	60	43	51	90	29	5.5	12.5	1.1	3.5	1	7	1	93	66	29	44	55	S	7	36	OVC	16	4	0	0	#	17	#	2	23	1
JUN	64	46	55	96	33	3.0	8.5	0.4	1.5	1	4	1	93	67	35	49	45	S	6	37	OVC	14	3	0	0	#	18	#	3	11	0
JUL	68	49	59	95	38	2.8	11.0	0.4	5.4	0	0	0	94	65	39	51	35	NW	7	28	OVC	12	3	0	0	1	19	#	5	6	0
AUG	69	49	59	99	36	2.5	10.1	0.3	2.4	0	0	0	95	67	40	52	40	S	6	34	OVC	11	3	0	0	#	20	#	5	6	0
SEP	66	46	56	92	28	5.7	10.9	1.4	3.3	1	7	1	94	67	37	50	60	S	7	30	OVC	13	4	0	0	1	20	#	4	14	#
OCT	58	40	50	81	24	10.7	27.2	2.3	4.9	1	7	1	94	73	31	45	75	S	8	46	OVC	18	8	0	0	1	22	0	1	23	4
NOV	50	36	44	69	5	13.7	29.1	4.4	4.2	1	11	8	92	80	25	40	100	ENE	5	47	OVC	20	10	1	#	2	20	0	0	27	6
DEC	48	34	41	64	7	15.6	27.8	4.1	6.2	8	15	7	91	85	27	37	105	SSE	9	48	OVC	23	14	5	1	1	22	0	0	29	13
ANN	57	40	49	99	5	105.2	131.6	55.4	7.2	16	56	8	93	72	29	43	80	S	7	50	OVC	214	74	33	4	7	231	1	20	258	68
YRS	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	11	21	21	21	21	21	21	21	21	21	21	21

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE.

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME.

$ HAIL RECORDED AS SNOWFALL JULY 1948-DECEMBER 1955
SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970

* 24-HOUR MAXIMUM IS FOR CALENDAR DAY.

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 5000 FEET AND/OR VISIBILITY LESS THAN 5 MI														
01	63	65	62	58	60	62	62	62	63	58	59	57	61	21
04	65	64	62	60	64	64	63	61	66	61	62	59	63	21
07	64	64	62	62	65	63	61	60	65	59	64	61	63	21
10	63	61	59	61	64	64	60	57	63	53	59	56	59	21
13	61	61	57	57	59	59	55	53	61	47	57	54	56	21
16	61	60	60	55	53	49	48	48	62	46	57	52	52	21
19	63	60	57	49	49	47	44	45	61	44	58	54	51	21
22	64	62	55	50	52	55	50	49	66	54	60	55	55	21
ALL HRS	64	63	61	57	59	59	55	53	63	54	60	55	58	21
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	52	53	49	46	50	53	52	56	48	48	46	55	51	21
04	52	52	53	52	59	63	66	63	48	48	50	54	55	21
07	52	55	54	53	55	62	63	62	47	49	52	54	55	21
10	52	53	52	56	56	59	53	55	43	44	49	55	52	21
13	54	56	56	53	50	46	40	38	40	44	50	56	48	21
16	54	54	54	50	46	42	32	34	35	39	50	55	45	21
19	52	50	50	43	42	41	38	35	35	40	47	56	44	21
22	51	50	47	41	44	46	46	43	38	44	49	56	46	21
ALL HRS	53	53	52	50	51	52	49	48	42	45	49	55	50	21
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	24	22	16	12	18	23	29	35	28	25	19	20	23	21
04	25	23	19	16	22	29	36	40	29	26	20	21	26	21
07	23	22	20	15	22	27	36	40	26	23	20	21	25	21
10	24	25	19	14	15	18	23	22	19	22	20	23	20	21
13	27	25	20	12	10	11	12	13	12	18	20	25	17	21
16	28	22	19	11	12	11	11	10	14	19	20	25	17	21
19	23	22	18	12	13	13	17	16	16	20	20	25	18	21
22	24	21	16	11	14	18	25	25	20	24	18	24	20	21
ALL HRS	25	23	18	13	16	19	24	25	21	22	20	23	21	21
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	10	7	6	5	7	7	13	17	15	14	7	7	10	21
04	10	8	7	6	9	11	16	22	14	15	8	8	11	21
07	11	9	8	6	9	11	16	23	15	10	7	9	11	21
10	10	9	6	4	5	5	5	6	6	9	7	10	7	21
13	11	8	5	2	3	3	2	2	3	6	6	8	5	21
16	11	8	4	4	3	3	2	2	5	8	7	8	5	21
19	9	8	6	3	4	4	5	6	7	8	7	10	6	21
22	9	8	5	4	4	6	9	11	9	14	7	9	8	21
ALL HRS	10	8	6	4	5	6	8	11	9	11	7	9	8	21
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI														
01	6	4	4	3	5	2	8	12	10	10	5	5	6	21
04	5	4	5	5	7	6	11	16	10	11	5	5	8	21
07	7	6	5	4	4	4	7	14	8	7	5	6	6	21
10	4	5	1	2	1	2	1	1	2	3	3	5	3	21
13	5	3	1	1	1	1	1	#	1	2	2	3	2	21
16	4	3	2	2	1	1	#	1	1	3	2	4	2	21
19	5	4	2	1	2	1	1	3	3	4	4	5	3	21
22	6	4	3	3	2	2	4	7	5	9	6	6	5	21
ALL HRS	5	4	3	3	3	2	4	7	5	6	4	5	4	21

QUILLAYUTE, WASHINGTON

PREPARED BY: NOCD ASHEVILLE

STATION NAME: SEATTLE/TACOMA, WASHINGTON
LOCATION: 47 27N 122 18W

ELEVATION: 400 FEET
PERIOD: 1948-1986

WMO #: 72793
WBAN: 24233

	TEMPERATURE (F)					PRECIPITATION (INCHES)						RELATIVE HUMIDITY		VAPOR PRESSURE INCHES OF MERCURY	DEW POINT(F)	PRESSURE ALTITUDE TENS OF FEET 1949 REF.	SURFACE WIND (KTS)			PREDOMINANT SKY CONDITION	MEAN NUMBER OF DAYS WITH									
	MEANS			EXTREMI						SNOWFALL &							PREVAILING				PRECIPITATION				THUNDERSTORMS	VISIBILITY	TEMPERATURE			
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM#	MEAN	MAXIMUM	24-HR MAXIMUM#	0400 LST	1300 LST				DIRECTION	MEAN SPEED	MAX GUST		>= 0.01	>= 0.50	SNOWFALL $ >= 0.1	SNOWFALL $ >= 1.5		< 7 MI IN VSBY	>= 90	>= 75	<= 45	<= 32
JAN	48	34	41	64	0	5.7	12.9	1	3.0	6	57	4.0	81	74	.19	32	120	S	10	42	OVR	19	4	1	#	#	19	0	8	30	11
FEB	48	31	40	74	1	4.4	9.1	1.5	1.8	2	38	7	81	69	.20	35	120	S	10	52	OVR	16	3	1	#	#	14	0	0	26	7
MAR	51	33	42	75	11	3.4	8.4	0	2.2	1	18	5	82	64	.21	36	110	S	9	46	OVR	17	2	1	#	1	12	0	0	30	5
APR	56	40	48	84	24	2.5	4.2	.3	1.9	1	2	1	83	60	.23	38	95	S	9	37	OVR	14	1	#	0	1	9	0	#	27	1
MAY	63	45	55	93	28	1.7	4.0	.4	1.8	1	1	1	82	57	.28	45	75	SSW	9	40	OVR	11	1	0	0	1	8	#	3	14	#
JUN	69	51	60	96	38	1.5	3.8	.1	1.8	0	0	0	82	56	.34	48	70	SSW	9	29	OVR	9	1	0	0	1	8	#	7	2	0
JUL	74	54	65	98	43	.8	2.4	T	.9	T	T	T	82	53	.38	51	60	N	9	25	CLR	5	#	0	0	1	9	1	15	#	0
AUG	74	54	64	99	44	1.2	4.6	T	1.6	0	0	0	84	56	.40	52	65	N	8	31	OVR	7	1	0	0	1	12	1	14	#	0
SEP	68	50	60	94	35	2.1	6.0	T	1.7	T	T	T	86	61	.34	44	80	N	8	43	OVR	10	1	0	0	1	16	#	6	4	0
OCT	58	45	52	82	28	3.4	7.9	.2	2.2	1	2	1	87	69	.30	45	95	S	9	59	OVR	13	2	1	#	#	19	1	8	16	#
NOV	50	39	45	74	6	5.8	9.7	.7	3.4	5	18	8	88	74	.23	38	115	S	10	58	OVR	18	2	1	#	1	18	0	0	25	5
DEC	45	35	41	64	6	6.1	11.8	1.4	2.1	5	22	9	83	77	.20	34	120	S	10	48	OVR	20	4	2	1	#	19	0	0	29	9
ANN	58	43	52	99	0	38.7	55.1	23.7	3.1	13	61	20	83	64	.27	42	100	S	9	58	OVR	157	22	8	3	1	167	3	46	203	38
YRS	39	39	39	39	39	39	39	39	39	39	39	39	32	32	32	32	32	32	32	15	32	39	39	39	39	39	39	39	39	39	39

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME

$ HAIL RECORDED AS SNOWFALL JULY 1948-DECEMBER 1955
SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970

+ 24-HOUR MAXIMUM IS FOR CALENDAR DAY

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY - JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 5000 FEET AND/OR VISIBILITY LESS THAN 5 MI													
01	60	53	47	41	37	38	39	38	34	46	59	64	45	32
04	62	56	54	46	43	39	42	44	37	61	65	53	32	
07	64	60	57	54	51	52	47	53	55	63	62	66	57	32
10	63	55	52	50	45	44	39	44	52	56	56	63	51	32
13	60	50	43	37	30	28	23	26	33	44	53	57	40	32
16	54	46	38	28	23	23	14	16	23	35	50	59	34	32
19	56	46	39	33	23	22	14	17	26	37	50	58	35	32
22	59	49	44	38	28	29	20	23	28	39	53	58	39	32
ALL HRS	61	53	48	43	36	36	28	32	38	48	57	63	45	32
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI													
01	44	36	30	28	25	23	17	19	23	28	39	44	29	32
04	46	40	33	36	29	35	28	32	35	41	41	47	32	32
07	48	49	38	39	36	41	38	42	45	48	44	49	42	32
10	47	40	34	36	31	32	31	35	38	40	37	47	37	32
13	44	31	25	28	25	26	21	26	20	26	36	42	25	32
16	40	27	20	23	18	21	14	16	20	26	36	42	25	32
19	40	27	21	25	18	21	14	16	20	26	36	42	25	32
22	41	32	25	27	21	24	16	18	22	28	37	43	27	32
ALL HRS	44	35	29	31	26	29	23	26	29	34	40	45	30	32
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 3 MI													
01	19	11	6	4	3	6	4	5	8	13	16	19	10	32
04	19	13	8	9	8	10	11	14	18	24	18	20	14	32
07	21	17	13	13	12	14	20	23	27	30	20	21	19	32
10	22	15	8	6	6	7	9	11	18	22	19	21	14	32
13	18	10	3	3	2	3	2	2	6	11	13	18	7	32
16	14	7	3	1	1	2	1	1	3	7	12	17	6	32
19	15	6	3	1	1	1	1	1	3	6	10	14	5	32
22	17	9	4	2	1	3	1	2	4	8	12	16	7	32
ALL HRS	19	11	6	5	4	6	6	8	11	16	15	19	10	32
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI													
01	10	4	2	1	1	2	2	2	3	7	9	9	4	32
04	10	7	4	2	4	5	6	9	16	11	12	8	32	
07	12	10	6	5	4	6	9	14	16	20	13	13	11	32
10	12	7	3	1	2	2	3	4	8	13	11	11	6	32
13	8	3	1	#	#	1	#	1	1	3	5	8	3	32
16	5	2	1	#	#	1	1	1	#	1	5	7	2	32
19	6	2	1	#	#	1	1	#	1	2	5	6	2	32
22	8	2	1	1	#	1	1	1	1	3	7	9	3	32
ALL HRS	9	5	2	2	1	2	3	4	5	8	8	9	5	32
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI													
01	6	2	1	0	#	#	0	#	2	5	7	6	2	32
04	7	4	2	1	1	1	1	2	5	12	8	7	4	32
07	8	6	3	2	2	2	4	7	11	14	9	7	6	32
10	8	4	2	#	#	#	#	1	3	7	7	7	3	32
13	4	1	#	0	0	0	0	#	#	1	2	5	1	32
16	5	1	#	0	0	#	0	0	0	#	1	4	1	32
19	3	#	#	0	0	0	0	0	0	#	1	4	1	32
22	4	1	1	#	0	0	#	0	#	1	4	6	1	32
ALL HRS	6	2	1	#	#	#	1	1	3	5	5	6	3	32

SEATTLE/TACOMA, WASHINGTON

PREPARED BY: NOCD ASHEVILLE STATION NAME: VANCOUVER, BC, CANADA ELEVATION: 9 FEET WMO #: 72892
LOCATION: 49 11N 123 10W

	TEMPERATURE (F)					PRECIPITATION (INCHES)						RELATIVE HUMIDITY		VAPOR PRESSURE INCHES OF MERCURY	DEW POINT (F)	PRESSURE ALTITUDE FEET (MEAN)	SURFACE WIND (KTS)			MEAN CLOUD AMOUNT (TENTHS)	MEAN NUMBER OF DAYS WITH								
	MEANS			EXTREME						SNOWFALL											PRECIPITATION				THUNDERSTORMS	VISIBILITY	TEMPERATURE			
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM	MEAN	MAXIMUM	24-HR MAXIMUM	0400 LST	1600 LST				DIRECTION	SPEED	MAX GUST		>= 0.01	>= 0.5	SNOWFALL >= 0.1	SNOWFALL >= 1.5		< 5/8 MI IN FOG	>= 90	>= 72	<= 32	<= 0
JAN	45	37	41	58	0	5.8	10.3	0.7	3.7	9	48	18	88	83	.20	34	-100	E	7	51	8	19	5	4	2	0	8	0	0	7	0
FEB	46	38	42	59	8	4.6	8.1	1.3	4.4	3	24	15	87	78	.22	37	-100	E	7	50	7	16	3	2	1	0	6	0	0	3	0
MAR	49	41	45	67	15	3.7	7.8	1.7	3.6	2	21	7	86	69	.23	37	-100	E	7	58	7	16	3	1	1	#	3	0	0	#	0
APR	56	43	49	76	26	2.4	5.0	0.5	2.2	#	5	5	84	65	.24	41	-100	E	7	43	6	13	1	#	0	#	1	0	0	#	0
MAY	62	46	54	84	33	1.9	4.8	0.3	1.7	0	#	0	85	60	.31	46	-100	E	6	37	6	10	1	0	0	#	1	0	0	0	0
JUN	67	52	60	87	40	1.8	4.5	0.2	2.0	0	0	0	86	62	.39	52	-50	E	6	32	6	11	1	0	0	#	1	0	0	0	0
JUL	72	55	63	89	44	1.2	3.7	#	1.6	0	0	0	86	61	.44	55	-100	E	6	30	5	6	1	0	0	#	1	0	1	0	0
AUG	71	55	63	92	47	1.5	4.0	0.1	2.4	0	0	0	89	63	.45	56	-150	E	6	27	5	8	1	0	0	#	4	#	#	0	0
SEP	65	50	58	84	33	2.4	5.7	#	3.4	0	0	0	93	70	.39	52	-100	E	6	44	6	9	1	0	0	#	10	0	#	0	0
OCT	56	44	50	74	24	4.8	11.1	1.4	4.7	1	9	4	91	79	.32	47	-100	E	6	44	7	15	4	0	0	#	11	0	#	0	0
NOV	49	37	43	63	18	5.6	11.1	1.5	4.8	4	15	15	92	81	.29	40	-100	E	7	41	7	17	4	1	#	#	9	0	0	#	0
DEC	44	34	39	58	18	6.5	11.8	2.4	4.5	6	15	10	91	87	.25	37	-100	E	7	50	8	19	4	2	1	0	9	0	0	5	0
ANN	56	43	50	92	0	42.2			4.8	25	48	18	89	72	.30	45	-100	E	7	58	6	159	28	10	5	3	63	#	#	19	0
EYR	30	30	30	38	38	30	33	33	61	30	38	51	10	10	10	10	27	20	20	10	20	20	10	20	41	17	30	9	10	10	10

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE
THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME WHEN LABELLED 99.95% OTHERWISE ITS THE MEAN
EYR IS EQUIVALENT YEARS OF RECORD IE E THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CACULATIONS

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	23	19	6	2	1	1	1	3	11	23	23	24	11	
04	24	21	7	3	1	4	5	10	20	27	24	23	14	
07	26	20	10	5	5	6	5	15	15	25	26	25	14	
10	22	21	11	3	3	4	2	6	12	25	21	21	10	
13	25	15	4	2	1	2	1	2	6	13	17	23	9	
16	24	11	4	1	1	1	1	2	3	10	15	21	8	
19	19	9	3	1	1	1	1	1	3	10	14	18	7	
22	24	15	4	1	1	1	1	1	6	17	19	23	9	
ALL HRS	24	18	7	3	2	3	2	5	13	20	21	23	12	20
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	10	9	1	1	#	#	#	1	5	13	11	10	5	
04	11	8	2	1	1	1	1	4	10	17	12	11	7	
07	11	11	4	1	1	1	1	4	13	19	13	12	8	
10	11	7	2	#	#	1	#	1	7	11	9	11	5	
13	7	3	1	#	#	0	#	#	1	3	6	7	2	
16	9	1	1	0	#	#	#	#	1	3	6	6	2	
19	7	3	1	0	#	#	0	#	1	5	6	6	2	
22	9	5	1	#	#	#	0	#	1	8	8	9	4	
ALL HRS	10	6	2	#	#	#	#	1	5	10	9	9	4	20
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 1/2 MI														
01	6	5	#	#	0	#	0	#	3	8	7	6	3	
04	6	5	1	#	#	#	#	1	6	11	9	7	4	
07	7	6	2	#	#	0	#	1	6	12	9	7	4	
10	5	3	#	0	0	0	0	0	#	4	4	5	2	
13	4	1	#	0	0	0	0	0	0	2	2	3	1	
16	3	1	0	0	0	0	0	0	0	2	3	2	1	
19	5	1	#	0	0	0	0	#	0	3	4	3	1	
22	5	3	#	0	0	0	0	#	2	5	6	4	2	
ALL HRS	5	1	1	#	#	#	#	#	2	6	5	5	2	20
CEILING LESS THAN 100 FEET AND/OR VISIBILITY LESS THAN 1/4 MI														
01	5	4	#	#	0	0	0	#	2	5	5	4	2	
04	5	4	1	#	#	0	0	#	1	8	7	5	3	
07	5	4	1	#	0	0	0	#	3	8	6	5	3	
10	4	2	#	0	0	0	0	#	2	3	3	3	1	
13	2	#	0	0	0	0	0	0	0	1	2	2	#	
16	2	#	0	0	0	0	0	0	0	1	2	2	1	
19	2	1	#	0	0	0	0	0	#	2	3	2	1	
22	3	2	#	#	0	0	0	0	1	3	4	3	1	
ALL HRS	3	2	#	#	#	0	#	#	1	4	4	3	2	20

VANCOUVER, BC, CANADA

STATION NAME: VICTORIA, B.C. CANADA
LOCATION: 48°39'N 123°26'W

ELEVATION: 63 FEET

NORMALS 1979

	TEMPERATURE (F)				PRECIPITATION (INCHES)					RELATIVE HUMIDITY				SURFACE WIND (KTS)			MEAN NUMBER OF DAYS WITH								
	NORMALS		EXTREMES					SNOWFALL										PRECIPITATION					TEMPERATURES		
	MEAN DAILY MAXIMUM	MEAN DAILY MINIMUM	AVERAGE MONTHLY MEAN	MEAN DAILY	MEAN	MEAN NUMBER OF DAYS	MAXIMUM MONTHLY	MAXIMUM 24 HR	MEAN	MEAN NUMBER OF DAYS	MAXIMUM 24 HR AMOUNT	1000 LST	1300 LST	MEAN HOURLY SPEED	DIRECTION	MAX GUST	MEAN CLOUD AMOUNT (TENTHS)	.01 INCH OR MORE	.10 INCH OR MORE	.50 INCH OR MORE	1.00 INCH OR MORE	THUNDERSTORMS	90 F OR HIGHER	32 F OR LOWER	0 F OR LOWER
JAN	46	36	42	59	4	5	10	1	2	6	12	12	87	79	21	34	18								
FEB	47	37	42	62	3	4	7	1	2	5	9	9	86	74	21	37	18								
MAR	50	39	45	64	3	4	7	1	2	5	9	9	86	74	21	37	18								
APR	54	43	49	69	2	3	5	T	1	4	7	7	82	66	20	37	17								
MAY	60	48	54	75	2	3	5	0	1	3	6	6	82	64	20	41	16								
JUN	64	52	58	79	1	2	4	0	0	2	5	5	85	67	20	43	16								
JUL	69	55	62	83	1	1	3	0	0	1	4	4	85	67	19	43	16								
AUG	70	56	63	84	1	1	3	0	0	1	4	4	85	67	18	43	16								
SEP	67	54	61	81	2	3	5	T	1	3	6	6	84	67	18	41	16								
OCT	59	48	54	73	4	5	9	1	2	5	10	10	86	74	19	37	17								
NOV	51	42	47	66	5	6	10	2	4	8	15	15	87	78	20	37	18								
DEC	47	38	43	61	5	6	11	3	5	10	18	18	87	79	21	36	18								
ANN	57	46	52	73	33	43	11	8	5	54	18	18	85	71	20	39	17								
YRS	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30								

A LESS THAN .5 DAYS, B .5 OR MORE BUT LESS THAN 1.0 DAYS, OR C 1.0 DAYS OR MORE AS APPLICABLE
THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.35 % OF THE TIME WHEN LABELED MB OR MBS OTHERWISE IT IS THE MEAN
EYR IS EQUIVALENT YEARS OF RECORD (I.E. THE ACTUAL NUMBER OF YEARS UTILIZED IN THE CALCULATIONS)

FLYING WEATHER - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
FLYING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	11	11	5	3	2	1	1	2	4	8	11	14	11	
04	12	12	5	3	2	1	1	2	4	8	11	14	11	
07	14	13	6	4	2	1	1	2	4	9	12	15	12	
10	11	11	5	3	2	1	1	2	4	8	11	14	11	
13	11	11	5	3	2	1	1	2	4	8	11	14	11	
16	11	11	5	3	2	1	1	2	4	8	11	14	11	
19	11	11	5	3	2	1	1	2	4	8	11	14	11	
22	11	11	5	3	2	1	1	2	4	8	11	14	11	
ALL HRS	11	11	5	3	2	1	1	2	4	8	11	14	11	20
FLYING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	5	5	3	1	1	*	*	1	2	5	6	6	3	
04	5	5	3	1	1	*	*	1	2	5	6	6	3	
07	7	6	3	1	1	*	*	1	3	6	7	7	4	
10	5	4	2	1	1	*	*	1	2	5	6	6	3	
13	5	4	2	1	1	*	*	1	2	5	6	6	3	
16	5	4	2	1	1	*	*	1	2	5	6	6	3	
19	5	4	2	1	1	*	*	1	2	5	6	6	3	
22	5	4	2	1	1	*	*	1	2	5	6	6	3	
ALL HRS	5	4	2	1	1	*	*	1	2	5	6	6	3	20
FLYING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 1/2 MI														
01	2	2	1	*	*	*	*	*	1	2	3	3	1	
04	2	2	1	*	*	*	*	*	1	2	3	3	1	
07	3	2	1	*	*	*	*	*	1	2	3	3	1	
10	2	2	1	*	*	*	*	*	1	2	3	3	1	
13	2	2	1	*	*	*	*	*	1	2	3	3	1	
16	2	2	1	*	*	*	*	*	1	2	3	3	1	
19	2	2	1	*	*	*	*	*	1	2	3	3	1	
22	2	2	1	*	*	*	*	*	1	2	3	3	1	
ALL HRS	2	2	1	*	*	*	*	*	1	2	3	3	1	20
FLYING LESS THAN 100 FEET AND/OR VISIBILITY LESS THAN 1/4 MI														
01	*	1	*	*	*	*	*	*	1	2	2	2	1	
04	*	1	*	*	*	*	*	*	1	2	2	2	1	
07	*	1	*	*	*	*	*	*	1	2	2	2	1	
10	*	1	*	*	*	*	*	*	1	2	2	2	1	
13	*	1	*	*	*	*	*	*	1	2	2	2	1	
16	*	1	*	*	*	*	*	*	1	2	2	2	1	
19	*	1	*	*	*	*	*	*	1	2	2	2	1	
22	*	1	*	*	*	*	*	*	1	2	2	2	1	
ALL HRS	*	1	*	*	*	*	*	*	1	2	2	2	1	20

VICTORIA, BC, CANADA

PREPARED BY: NOAA/NCDC ASHEVILLE

STATION NAME: [illegible]

LOCATION: 48 23' 122 40W

PERIOD: 1945-1986

WBAN: 24255

	TEMPERATURE (F) MEANS MAXIMUM	MEANS MINIMUM	MEANS AVERAGE	EXTREMES MAXIMUM	EXTREMES MINIMUM	PRECIPITATION (INCHES) MEAN	MAXIMUM	MINIMUM	24-HR MAXIMUM #	SNOWFALL $ MEAN	SNOWFALL $ MAXIMUM	SNOWFALL $ 24-HR MAXIMUM #	RELATIVE HUMIDITY 0400 LST	RELATIVE HUMIDITY 1300 LST	VAPOR PRESSURE INCHES OF MERCURY DEW POINT(F)	PRESSURE ALTITUDE TENS OF FEET 1945-1965	SURFACE WIND (KTS) PREVAILING DIRECTION	PREVAILING MEAN SPEED	MAX GUST	PREDOMINANT SKY CONDITION	MEAN NUMBER OF DAYS WITH PRECIPITATION >= 0.01	>= 0.50	SNOWFALL $ >= 0.1	SNOWFALL $ >= 1.5	THUNDERSTORMS	VISIBILITY < 7 MI IN FOG	TEMPERATURE >= 90	>= 75	<= 45	<= 32
JAN	44	34	40	64	-1	2.4	6.1	0.4	1.1	5	17	6	84	75	20	34	85	E	5	60	OVR	17	1	2	1	#	10	0	0	29	11
FEB	48	36	42	70	6	1.7	3.8	0.5	1.3	1	10	4	85	72	21	36	85	SE	11	58	OVR	13	#	1	#	#	9	0	0	26	8
MAR	50	37	44	74	11	1.9	2.4	0.8	1.2	1	14	5	85	68	23	37	75	SE	11	54	OVR	14	#	1	#	#	6	0	0	29	6
APR	54	41	48	78	26	1.4	2.8	0.3	1.1	1	9	1	85	67	25	40	55	W	9	53	OVR	12	#	#	0	#	5	0	#	26	1
MAY	59	45	52	85	32	1.2	3.7	0.2	1.3	1	6	1	86	67	30	44	40	W	7	47	OVR	9	#	0	0	#	6	0	#	13	#
JUN	62	49	56	93	37	1.2	4.2	0.1	2.3	0	0	0	88	69	34	48	30	W	6	39	OVR	8	#	0	0	#	7	#	1	3	0
JUL	65	51	58	96	41	0.7	2.1	0.1	1.0	0	0	0	89	70	38	51	25	W	5	44	OVR	5	#	0	0	#	10	0	2	1	0
AUG	66	51	58	88	38	0.8	2.5	0.1	0.9	0	0	0	90	70	38	52	25	W	5	44	OVR	6	#	0	0	1	13	0	2	1	0
SEP	63	48	56	88	29	1.3	4.2	0.2	3.0	0	0	0	89	71	36	49	45	W	6	51	OVR	8	#	0	0	#	14	0	1	8	#
OCT	57	43	50	76	20	1.4	5.6	0.2	1.3	1	7	1	88	73	30	45	60	SE	10	58	OVR	13	1	0	0	#	16	0	#	19	1
NOV	50	38	44	69	9	2.1	4.9	0.6	1.5	1	13	7	85	74	23	36	NO	SE	11	56	OVR	16	1	#	#	#	11	0	0	25	6
DEC	45	36	41	62	3	2.0	6.5	0.4	1.8	3	13	7	85	77	21	35	90	SE	12	58	OVR	17	1	1	#	#	9	0	0	28	9
ANN	54	42	48	93	-1	19.8	25.5	12.5	3.0	7	24	7	87	71	28	42	60	W	8	60	OVR	140	6	5	2	3	116	#	6	207	42
YRS	42	42	42	42	42	42	42	42	42	42	42	42	32	32	32	32	32	32	32	39	32	42	42	42	42	42	42	42	42	42	42

LESS THAN 0.5 DAYS, 0.5 OR 0.05 INCH, OR 0.5 PERCENT AS APPLICABLE.

THE VALUE LISTED UNDER PRESSURE ALTITUDE INDICATES THAT VALUE IS EXCEEDED ONLY 0.05 % OF THE TIME

$ HAIL RECORDED AS SNOWFALL JULY 1948-DECEMBER 1955.
SLEET/ICE PELLETS RECORDED EFFECTIVE APRIL 1970.

24-HOUR MAXIMUM IS FOR CALENDAR DAY

FLYING WEATHER, - PERCENT OF HOURS

HOUR (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	YRS
CEILING LESS THAN 5000 FEET AND/OR VISIBILITY LESS THAN 5 MI														
01	56	50	41	35	30	33	26	30	34	46	52	58	41	32
04	58	55	47	45	44	47	43	43	45	54	55	58	49	32
07	59	60	53	49	48	51	47	51	52	59	56	59	54	32
10	54	51	46	39	39	40	38	39	39	47	48	56	45	32
13	49	43	34	27	23	25	22	21	26	34	42	52	33	32
16	48	40	29	23	20	20	13	15	20	32	40	49	29	32
19	50	42	34	27	24	23	14	16	24	34	45	53	32	32
22	54	45	36	29	25	26	17	22	26	38	47	55	35	32
ALL HRS	54	49	40	34	31	33	28	30	33	43	48	55	40	32
CEILING LESS THAN 3000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	39	32	25	18	15	17	15	20	19	28	34	41	25	32
04	42	36	32	26	26	30	30	33	31	37	36	41	33	32
07	43	43	37	31	29	33	34	38	37	43	39	43	38	32
10	40	37	34	23	22	27	27	28	28	34	32	38	31	32
13	37	29	22	15	12	14	13	13	15	23	29	35	21	32
16	35	27	16	11	7	7	6	7	10	17	26	35	17	32
19	35	28	18	11	8	7	6	8	11	19	30	37	18	32
22	36	29	20	13	12	12	8	12	14	21	30	38	20	32
ALL HRS	38	33	26	19	16	18	17	20	21	28	32	38	26	32
CEILING LESS THAN 1000 FEET AND/OR VISIBILITY LESS THAN 3 MI														
01	14	8	3	2	4	5	8	10	8	14	11	12	8	32
04	15	10	6	5	7	9	15	19	17	22	12	12	12	32
07	14	10	8	7	7	11	19	22	21	23	12	11	14	32
10	13	9	5	3	4	5	10	11	12	14	8	11	9	32
13	9	6	2	1	1	2	2	3	5	7	8	8	4	32
16	10	6	1	1	1	1	1	1	3	6	7	8	4	32
19	10	6	1	#	2	1	1	2	3	6	8	9	4	32
22	11	7	1	1	2	3	3	4	5	9	9	10	5	32
ALL HRS	12	8	4	2	3	5	7	9	9	12	9	10	6	32
CEILING LESS THAN 500 FEET AND/OR VISIBILITY LESS THAN 1 MI														
01	6	3	1	1	1	3	5	7	6	8	7	6	5	32
04	6	5	3	2	3	5	10	12	12	14	7	5	7	32
07	7	5	4	4	4	6	13	15	14	16	7	5	8	32
10	5	3	1	1	2	2	6	6	6	8	4	4	4	32
13	3	1	1	#	#	1	1	1	2	2	3	3	1	32
16	3	1	#	#	#	#	#	1	1	2	2	2	1	32
19	4	2	#	#	1	#	#	1	2	3	3	3	1	32
22	5	3	#	#	1	1	2	3	3	5	5	5	3	32
ALL HRS	5	3	1	1	2	2	5	6	6	7	5	4	4	32
CEILING LESS THAN 200 FEET AND/OR VISIBILITY LESS THAN 3/4 MI														
01	3	2	1	#	1	1	2	4	5	7	5	4	3	32
04	4	3	2	1	2	3	7	9	9	11	5	4	5	32
07	4	3	3	2	3	4	9	10	12	12	5	3	6	32
10	3	1	1	#	#	#	2	2	3	3	2	2	2	32
13	1	#	#	#	#	#	#	#	1	1	1	1	1	32
16	1	1	#	#	#	#	#	#	1	1	1	1	1	32
19	2	1	#	#	#	#	#	1	1	2	2	2	1	32
22	3	2	#	#	#	#	1	1	3	4	3	3	2	32
ALL HRS	3	2	1	1	1	1	3	3	4	5	3	3	2	32

WHIDBEY ISLAND, WASHINGTON